APT

User Manual

VEYRON II PREMIUM

1600-12/2600-24
MPPT SOLAR INVERTER

Version: 1.0

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ABOUT THIS MANUAL

Purpose

This manual describes the assembly, installation, operation and troubleshooting of this unit. Please read this manual carefully before installations and operations. Keep this manual for future reference.

Scope

This manual provides safety and installation guidelines as well as information on tools and wiring.

SAFETY INSTRUCTIONS

⚠ **WARNING: This chapter contains important safety and operating instructions. Read and keep this manual for future reference.**

1. Before using the unit, read all instructions and cautionary markings on the unit, the batteries and all appropriate sections of this manual.
2. **CAUTION** --To reduce risk of injury, charge only deep-cycle lead acid type rechargeable batteries. Other types of batteries may burst, causing personal injury and damage.
3. Do not disassemble the unit. Take it to a qualified service center when service or repair is required. Incorrect re-assembly may result in a risk of electric shock or fire.
4. To reduce risk of electric shock, disconnect all wirings before attempting any maintenance or cleaning. Turning off the unit will not reduce this risk.
5. **CAUTION** – Only qualified personnel can install this device with battery.
6. **NEVER** charge a frozen battery.
7. For optimum operation of this inverter/charger, please follow required spec to select appropriate cable size. It's very important to correctly operate this inverter/charger.
8. Be very cautious when working with metal tools on or around batteries. A potential risk exists to drop a tool to spark or short circuit batteries or other electrical parts and could cause an explosion.
9. Please strictly follow installation procedure when you want to disconnect AC or DC terminals. Please refer to INSTALLATION section of this manual for the details.
10. One piece of 150A fuse is provided as over-current protection for the battery supply.
11. GROUNDING INSTRUCTIONS -This inverter/charger should be connected to a permanent grounded wiring system. Be sure to comply with local requirements and regulation to install this inverter.
12. NEVER cause AC output and DC input short circuited. Do NOT connect to the mains when DC input short circuits.
13. **Warning!!** Only qualified service persons are able to service this device. If errors still persist after following troubleshooting table, please send this inverter/charger back to local dealer or service center for maintenance.
14. **WARNING:** Because this inverter is non-isolated, only three types of PV modules are acceptable: single crystalline, poly crystalline with class A-rated and CIGS modules. To avoid any malfunction, do not connect any PV modules with possible current leakage to the inverter. For example, grounded PV modules will cause current leakage to the inverter. When using CIGS modules, please be sure NO grounding.
15. **CAUTION:** It's requested to use PV junction box with surge protection. Otherwise, it will cause damage on inverter when lightning occurs on PV modules.

INTRODUCTION

This is a multi-function inverter/charger, combining functions of inverter, solar charger and battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC/solar charger priority, and acceptable input voltage based on different applications.

Features

- Pure sine wave inverter
- Inverter running without battery
- Configurable input voltage range for home appliances and personal computers via LCD setting
- Configurable battery charging current based on applications via LCD setting
- Configurable AC/Solar Charger priority via LCD setting
- Compatible to mains voltage or generator power
- Auto restart while AC is recovering
- Overload/ Over temperature/ short circuit protection
- Smart battery charger design for optimized battery performance
- Cold start function

Basic System Architecture

The following illustration shows basic application for this inverter/charger. It also includes following devices to have a complete running system:

- Generator or Utility.
- PV modules

Consult with your system integrator for other possible system architectures depending on your requirements.

This inverter can power all kinds of appliances in home or office environment, including motor-type appliances such as tube light, fan, refrigerator and air conditioner.

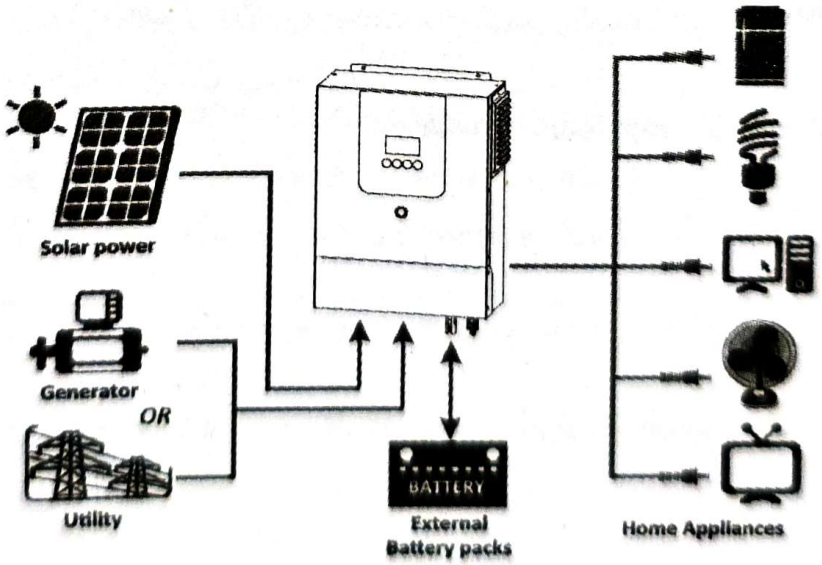
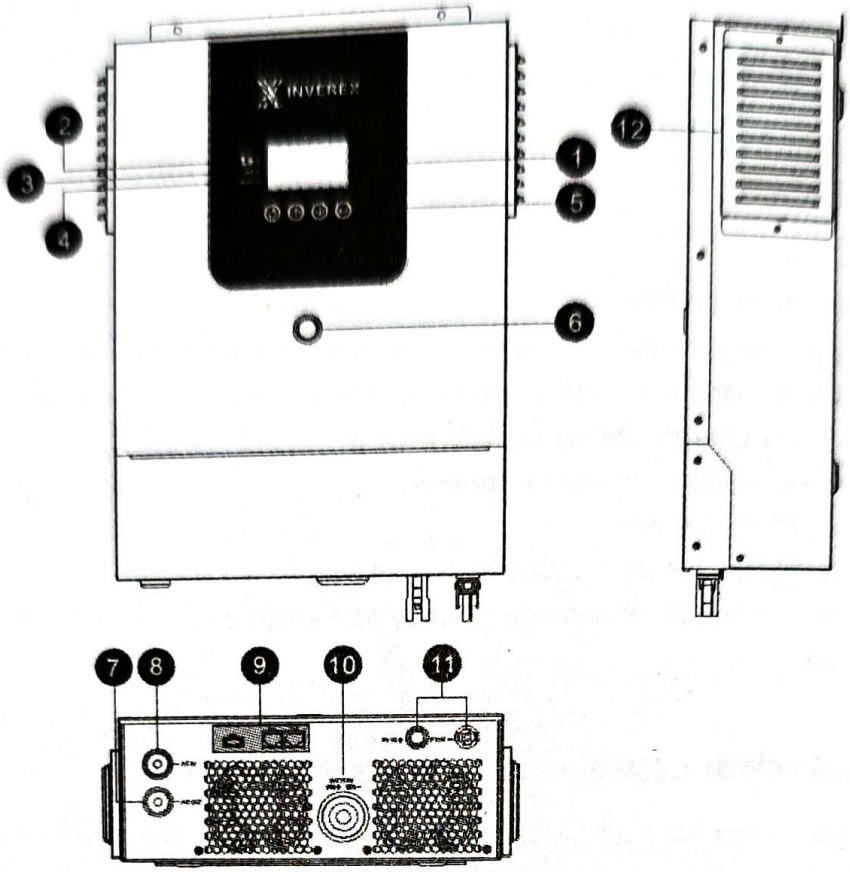


Figure 1 Power System

Product Overview



1. LCD display
2. Status indicator
3. Charging indicator
4. Fault indicator
5. Function buttons
6. Power on/off switch
7. AC output
8. AC input
9. Wi-Fi/RS-232/BMS communication port/OTG function
10. Battery input
11. PV input
12. Anti-dust filter

INSTALLATION

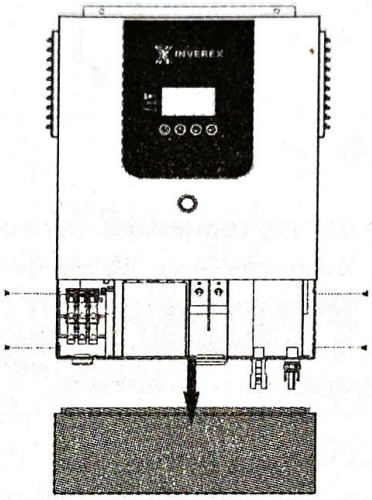
Unpacking and inspection

Before installation, please inspect the unit. Be sure that nothing inside the package is damaged. You should have received the following items inside of package:

- The unit x 1
- User manual x 1
- Communication cable x 1

Preparation

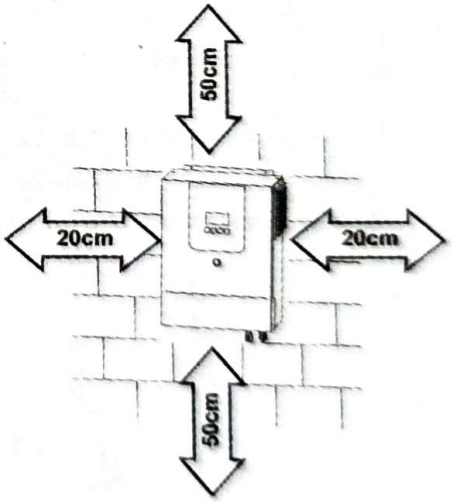
Before connecting all wirings, please take off bottom cover by removing four screws as shown below.



Mounting the Unit

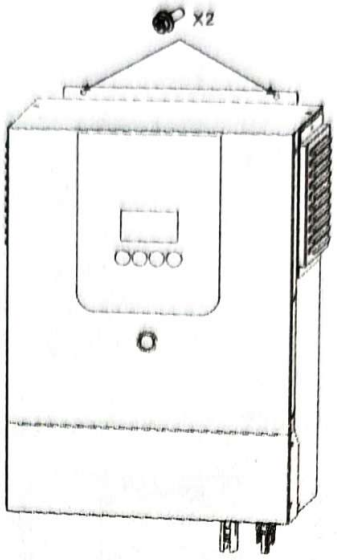
Consider the following points before selecting where to install:

- Do not mount the inverter on flammable construction materials.
- Mount on a solid surface
- Install this inverter at eye level in order to allow the LCD display to be read at all times.
- For proper air circulation to dissipate heat, allow a clearance of approx. 20 cm to the side and approx. 50 cm above and below the unit.
- The ambient temperature should be between 0°C and 55°C to ensure optimal operation.
- The recommended installation position is to be adhered to the wall vertically.
- Be sure to keep other objects and surfaces as shown in the diagram to guarantee sufficient heat dissipation and to have enough space for removing wires.



SUITABLE FOR MOUNTING ON CONCRETE OR OTHER NON-COMBUSTIBLE SURFACE ONLY.

Install the unit by screwing two screws. It's recommended to use M4 or M5 screws.



Battery Connection

This model can be operated without battery connection. Connect to battery if necessary.

CAUTION: For safety operation and regulation compliance, it's requested to install a separate DC over-current protector or disconnect device between battery and inverter. It may not be requested to have a disconnect device in some applications, however, it's still requested to have over-current protection installed. Please refer to typical amperage in below table as required fuse or breaker size.

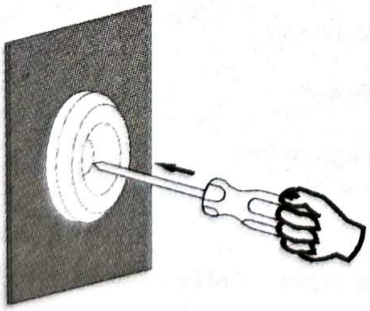
WARNING! All wiring must be performed by a qualified personnel.

WARNING! It's very important for system safety and efficient operation to use appropriate cable for battery connection. To reduce risk of injury, please use the proper recommended cable as below.

Recommended battery cable size:

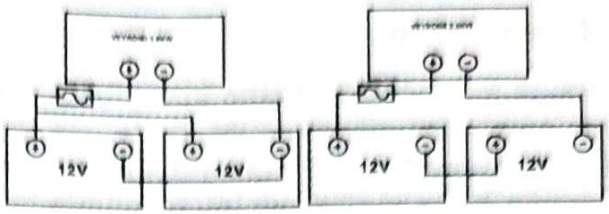
Model	Wire Size	Ring Terminal			Torque value (max)
		Cable (mm^2)	Dimensions		
			D(mm)	L(mm)	
VEYRONII PREMIUM 1600-12	1 x 4AWG	22	6.4	29.2	2~3 Nm
VEYRONII PREMIUM 2600-24					

Before connecting the wires,please use a sharp object to puncture the waterproof connecter.

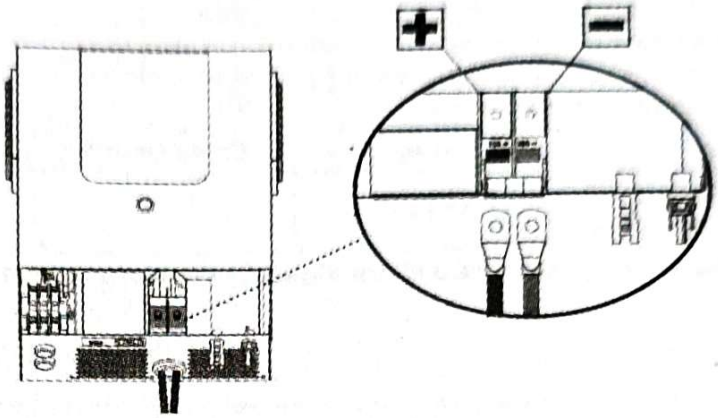


Please follow below steps to implement battery connection:

1. Assemble battery ring terminal based on recommended battery cable and terminal size.
2. Connect all battery packs as below chart. It is recommend to connect at least 100Ah capacity battery.



3. Cable to the battery terminal block with the bolts properly tightened. Refer to battery cable size for torque value.



Prepare four battery wires depending on cable size (refer to recommended cable size table). Apply ring terminals to your battery wires and secure it to the battery terminal block with the bolts properly tightened. Refer to battery cable size for torque value. Make sure polarity at both the battery and the inverter is correctly connected and ring terminals are secured to the battery terminals.

⚠	**WARNING: Shock Hazard** Installation must be performed with care due to high battery voltage in series.
⚠	**CAUTION!!** Before making the final DC connection or closing DC breaker/disconnector, be sure positive (+) must be connected to positive (+) and negative (-) must be connected to negative (-).

AC Input/Output Connection

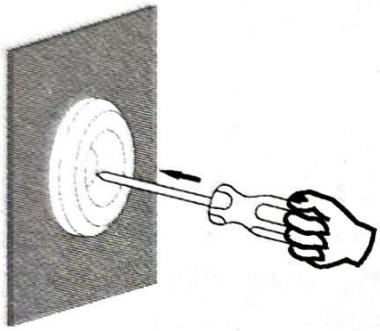
CAUTION!! Before connecting to AC input power source, please install a **separate** AC breaker between inverter and AC input power source. This will ensure the inverter can be securely disconnected during maintenance and fully protected from over current of AC input. The recommended spec of AC breaker is 20A.
CAUTION!! There are two terminal blocks with "IN" and "OUT" markings. Please do NOT mis-connect input and output connectors.

WARNING! All wiring must be performed by a qualified personnel.
WARNING! It's very important for system safety and efficient operation to use appropriate cable for AC input connection. To reduce risk of injury, please use the proper recommended cable size as below.

Suggested cable requirement for AC wires

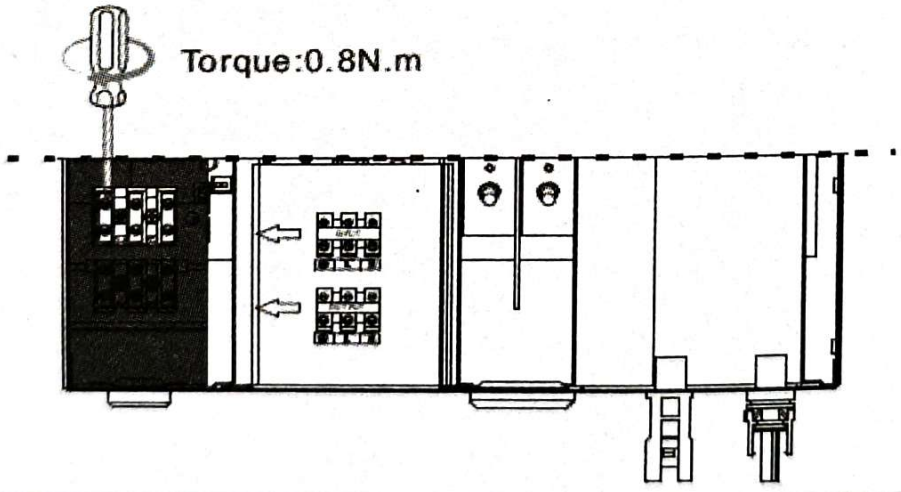
Model	Gauge	Cable (mm^2)	Torque Value
VEYRONII PREMIUM 1600-12 VEYRONII PREMIUM 2600-24	12 AWG	4	0.8 Nm

Before connecting the wires, please use a sharp object to puncture the waterproof connecter.



Please follow below steps to implement AC input/output connection:

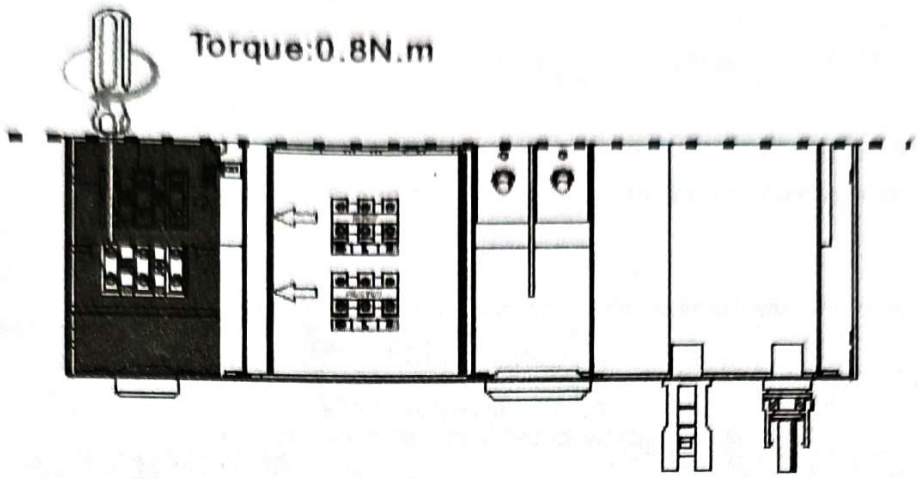
1. Before making AC input/output connection, be sure to open DC protector or disconnector first.
2. Remove insulation sleeve 8mm for five conductors.
3. Insert AC input wires according to polarities indicated on terminal block and tighten the terminal screws. Be sure to connect PE protective conductor (⏚) first.
   ⏚→**Ground (yellow-green)**
   L→LINE (brown or black)
   N→Neutral (blue)



> ⚠ **WARNING:**
> Be sure that AC power source is disconnected before attempting to hardwire it to the unit.

4. Then, insert AC output wires according to polarities indicated on terminal block and tighten terminal screws. Be sure to connect PE protective conductor (⏚) first.

⏚→Ground (yellow-green)
L→LINE (brown or black)
N→Neutral (blue)



5. Make sure the wires are securely connected.

CAUTION: Appliances such as air conditioner are required at least 2~3 minutes to restart because it's required to have enough time to balance refrigerant gas inside of circuits. If a power shortage occurs and recovers in a short time, it will cause damage to your connected appliances. To prevent this kind of damage, please check manufacturer of air conditioner if it's equipped with time-delay function before installation. Otherwise, this inverter/charger will trig overload fault and cut off output to protect your appliance but sometimes it still causes internal damage to the air conditioner.

PV Connection

CAUTION: Before connecting to PV modules, please install **separately** DC circuit breakers between inverter and PV modules.
NOTE1: Please use 600VDC/30A circuit breaker.
NOTE2: The overvoltage category of the PV input is II.
Please follow the steps below to implement PV module connection:

WARNING: Because this inverter is non-isolated, only three types of PV modules are acceptable: single crystalline and poly crystalline with class A-rated and CIGS modules.
To avoid any malfunction, do not connect any PV modules with possible current leakage to the inverter. For example, grounded PV modules will cause current leakage to the inverter. When using CIGS modules, please be sure NO grounding.
CAUTION: It's required to use PV junction box with surge protection. Otherwise, it will cause damage on inverter when lightning occurs on PV modules.

Step 1: Check the input voltage of PV array modules. This system is applied with one strings of PV array. Please make sure that the maximum current load of each PV input connector is 20A.

CAUTION: Exceeding the maximum input voltage can destroy the unit!! Check the system before wire connection.

Step 2: Disconnect the circuit breaker and switch off the DC switch.

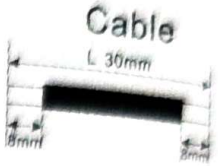
Step 3: Assemble provided PV connectors with PV modules by the following steps.
Components for PV connectors and Tools:

Female connector housing	
Female terminal	

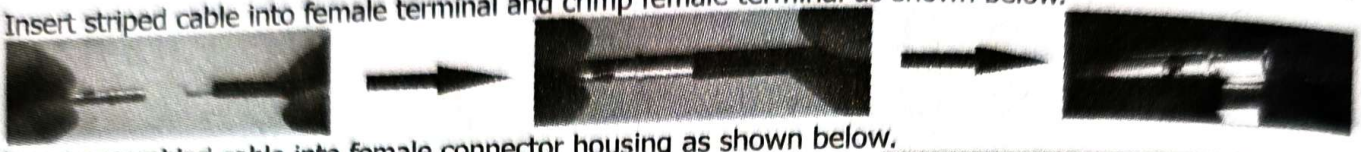
Male connector housing	
Male terminal	
Crimping tool and spanner	

Prepare the cable and follow the connector assembly process:

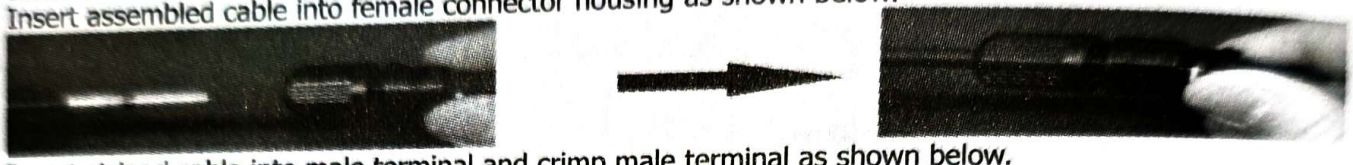
Strip one cable 8 mm on both end sides and be careful NOT to nick conductors.



Insert striped cable into female terminal and crimp female terminal as shown below.

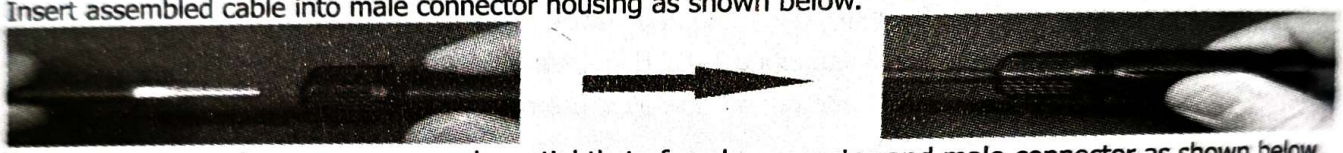


Insert assembled cable into female connector housing as shown below.



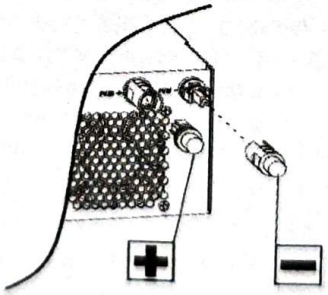
Insert striped cable into male terminal and crimp male terminal as shown below.

Insert assembled cable into male connector housing as shown below.



Then, use spanner to screw pressure dome tightly to female connector and male connector as shown below.

Step 4: Check correct polarity of connection cable from PV modules and PV input connectors. Then, connect positive pole (+) of connection cable to positive pole (+) of PV input connector. Connect negative pole (-) of connection cable to negative pole (-) of PV input connector.



WARNING! For safety and efficiency, it's very important to use appropriate cables for PV module connection. To reduce risk of injury, please use the proper cable size as recommended below.

Conductor cross-section (mm^2)	AWG no.
4~6	10~12

CAUTION: Never directly touch the terminals of inverter. It might cause lethal electric shock.

Recommended Panel Configuration

When selecting proper PV modules, please be sure to consider the following parameters:

1. Open circuit Voltage (Voc) of PV modules not to exceed maximum PV array open circuit voltage of the inverter.
2. Open circuit Voltage (Voc) of PV modules should be higher than the start-up voltage.

INVERTER MODEL	VEYRONII PREMIUM 1600-12	VEYRONII PREMIUM 2600-24
Max. PV Array Open Circuit Voltage	450Vdc	
PV Array MPPT Voltage Range	30~400Vdc	
Start-up Voltage	40Vdc +/- 10Vdc	
Max. PV Current	20A	

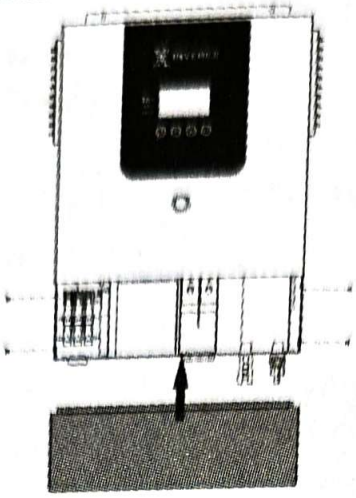
Recommended solar panel configuration:

Solar Panel Spec. (reference)	SOLAR INPUT (40V(Start-up Voltage)≤Voc* Number of modules in series≤450V(Max. PV Array Open Circuit Voltage))	Q'ty of panels	Total Input Power 4000(Max. PV Array Power)>= Q'ty of modules*Wp
- 555Wp - Vmp: 32.06Vdc - Imp: 17.32A - Voc: 38.46Vdc - Isc: 18.33A - Cells: 110	**Min in series: 2pcs, per input** **Max. in series: 7pcs, per input**		
	2pcs in series	2pcs	1110W
	4pcs in series	4pcs	2220W
	6pcs in series	6pcs	3330W
	7pcs in series	7pcs	3885W

Solar Panel Spec. (reference)	SOLAR INPUT (40V (Start-up Voltage)≤Voc* Number of modules in series≤450V(Max. PV Array Open Circuit Voltage))	Q'ty of panels	Total Input Power 4000(Max. PV Array Power)>= Q'ty of modules*Wp
- 580Wp - Vmp: 44.78Vdc - Imp: 12.96A - Voc: 53.3Vdc - Isc: 13.82A - Cells: 156	**Min in series: 2pcs, per input** **Max. in series: 7pcs, per input**		
	2pcs in series	2pcs	1160W
	4pcs in series	4pcs	2320W
	6pcs in series	6pcs	3480W
	7pcs in series	7pcs	4000W

Final Assembly

After connecting all wirings, please put bottom cover back by screwing four screws as shown below.



Communication Connection

Serial Connection

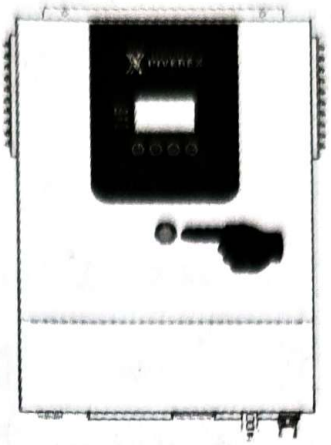
Please use supplied communication cable to connect to inverter and PC. Insert bundled CD into a computer and follow on-screen instruction to install the monitoring software. For the detailed software operation, please check user manual of software inside of CD.

Wi-Fi Connection

This unit is equipped with a Wi-Fi transmitter. Wi-Fi transmitter can enable wireless communication between solar inverters and monitoring platform. Users can access and control the monitored inverter with downloaded APP. You may find "i.Solar" app from the Apple® Store or Google® Play Store. All data loggers and parameters are saved in iCloud. For quick installation and operation, please check Appendix II.

OPERATION

Power ON/OFF



Once the unit has been properly installed and the batteries are connected well, press On/Off switch for 3 seconds to turn on the unit.

Operation and Display Panel

The operation and display panel, shown in below chart, is on the front panel of the inverter. It includes three indicators, four function keys and a LCD display, indicating the operating status and input/output power information.

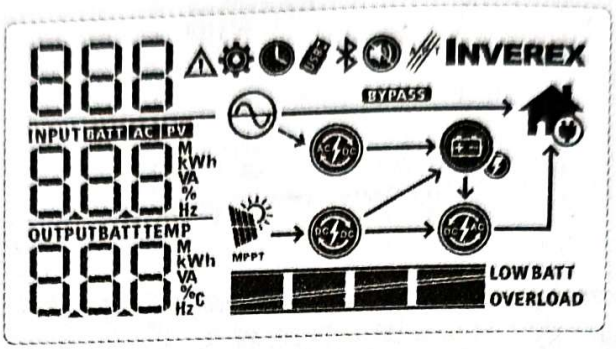
LED Indicator

LED Indicator			Messages
AC / INV	Green	Solid On	Output is powered by utility in Line mode.
		Flashing	Output is powered by battery or PV in battery mode.
CHG	Green	Solid On	Battery is fully charged.
		Flashing	Battery is charging.
FAULT	Red	Solid On	Fault occurs in the inverter.
		Flashing	Warning condition occurs in the inverter.

Function Keys

Function Key		Description
	ESC	To exit setting mode
	Up	To go to previous selection
	Down	To go to next selection
	Enter	To confirm the selection in setting mode or enter setting mode

LCD Display Icons



Icon	Function description
Input Source Information	
AC	Indicates the AC input.
PV	Indicates the PV input
INPUT BATT AC PV M kWh VA % Hz	Indicate input voltage, input frequency, PV voltage, charger current, charger power, battery voltage.
Configuration Program and Fault Information	
	Indicates the setting programs.
	Indicates the warning and fault codes. Warning: flashing with warning code. Fault: lighting with fault code
Output Information	
OUTPUT BATT TEMP M kWh VA %C Hz	Indicate output voltage, output frequency, load percent, load in VA, load in Watt and discharging current.
Battery Information	
BATT	Indicates battery level by 0-24%, 25-49%, 50-74% and 75-100% in battery mode and charging status in line mode.

In AC mode, it will present battery charging status.

Status	Battery voltage	LCD Display
Constant Current mode / Constant Voltage mode	<2V/cell	4 bars will flash in turns.
	2 ~ 2.083V/cell	Bottom bar will be on and the other three bars will flash in turns.
	2.083 ~ 2.167V/cell	Bottom two bars will be on and the other two bars will flash in turns.
	> 2.167 V/cell	Bottom three bars will be on and the top bar will flash.
Floating mode. Batteries are fully charged.		4 bars will be on.

In battery mode, it will present battery capacity.

Load Percentage	Battery Voltage	LCD Display
Load >50%	< 1.85V/cell	LOW BATT
	1.85V/cell ~ 1.933V/cell	BATT
	1.933V/cell ~ 2.017V/cell	BATT
	> 2.017V/cell	BATT
Load < 50%	< 1.892V/cell	LOW BATT
	1.892V/cell ~ 1.975V/cell	BATT
	1.975V/cell ~ 2.058V/cell	BATT
	> 2.058V/cell	BATT

Load Information		
OVERLOAD	Indicates overload.	
OVERLOAD	Indicates the load level by 0-24%, 25-49%, 50-74% and 75-100%.	
	0%~24%	25%~49%
	LOAD	LOAD
	50%~74%	75%~100%
	LOAD	LOAD

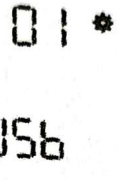
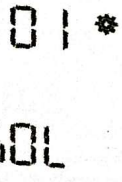
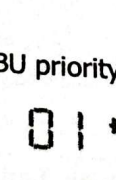
Mode Operation Information	
	Indicates unit connects to the mains.
MPPT	Indicates unit connects to the PV panel.
BYPASS	Indicates load is supplied by utility power.
	Indicates the utility charger circuit is working.
	Indicates the solar charger circuit is working.

	Indicates the DC/AC inverter circuit is working.
Mute Operation	
	Indicates unit alarm is disabled.

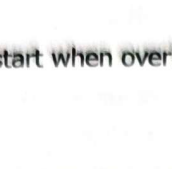
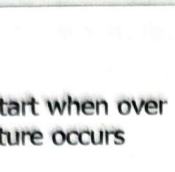
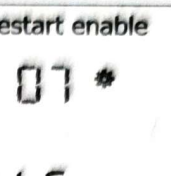
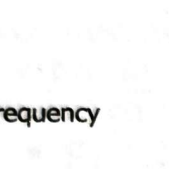
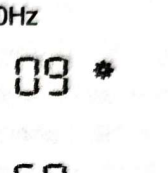
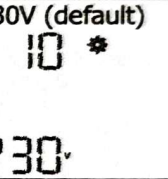
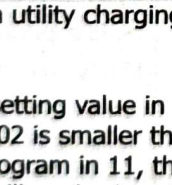
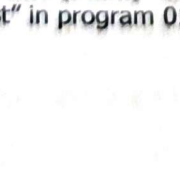
LCD Setting

After pressing and holding "↵" button for 3 seconds, the unit will enter setting mode. Press "↑" or "↓" button to select setting programs. And then, press "↵" button to confirm the selection or "⏻" button to exit.

Setting Programs:

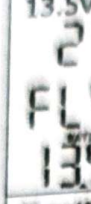
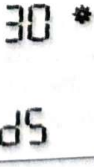
Program	Description	Selectable option	
00	Exit setting mode	Escape 	
01	Output source priority: To configure load power source priority	Utility first (default) 	Utility will provide power to the loads as first priority. Solar and battery energy will provide power to the loads only when utility power is not available.
		Solar first 	Solar energy provides power to the loads as first priority. If solar energy is not sufficient to power all connected loads, battery energy will supply power the loads at the same time.
		SBU priority 	Solar energy provides power to the loads as first priority. If solar energy is not sufficient to power all connected loads, battery energy will supply power to the loads at the same time. Utility provides power to the loads only when battery voltage drops to either low-level warning voltage or the setting point in program 12.
02	Maximum charging current: To configure total charging current for solar and utility chargers. (Max. charging current = utility charging current + solar charging current)	60A (default) 	Setting range is from 10A to 100A. Increment of each click is 10A.
03	AC input voltage range	Appliances (default) 	If selected, acceptable AC input voltage range will be within 90-280VAC.

		UPS 03 * UPS	If selected, acceptable AC input voltage range will be within 170-280VAC.
05	Battery type	AGM (default) 05 * AGn	Flooded 05 * FLd
		User-Defined 05 * USE	If "User-Defined" is selected, battery charge voltage and low DC cut-off voltage can be set up in program 26, 27 and 29.
		Pylontech battery 05 * PYL	If selected, programs of 02, 26, 27 and 29 will be automatically set up. No need for further setting.
		LIb-protocol compatible battery 05 * LIb	Select "LIb" if using Lithium battery compatible to Lib protocol. If selected, programs of 02, 26, 27 and 29 will be automatically set up. No need for further setting.
		3rd party Lithium battery 05 * LIC	If selected, programs of 02, 26, 27 and 29 will be automatically set up. No need for further setting. Please contact the battery supplier for installation procedure.
		ISC 05 * ISC	If selected, setting value in program 26 and program 27 are 14V, program 29 is 10.5V for 12V model, program 26 and program 27 are 28V and program 29 is 21V for 24V model.
		IPW 05 * IPu	If selected, programs of 02, 26, 27 and 29 will be automatically set up. No need for further setting. Please contact the battery supplier for installation procedure.

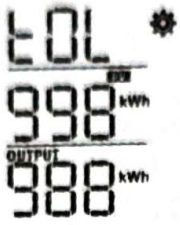
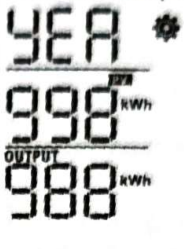
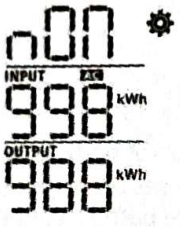
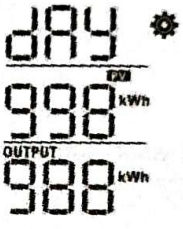
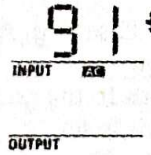
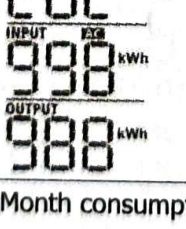
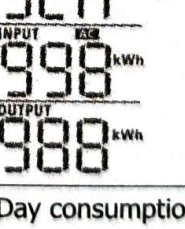
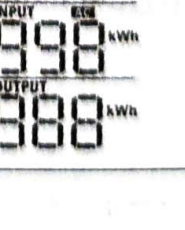
06	Auto restart when overload occurs	Restart disable (default) 	Restart enable
07	Auto restart when over temperature occurs	Restart disable (default) 	Restart enable 
09	Output frequency	50Hz (default) 	60Hz 
10	Output voltage	220V 240V 	230V (default) 
11	Maximum utility charging current Note: If setting value in program 02 is smaller than that in program in 11, the inverter will apply charging current from program 02 for utility charger.	30A (default) 	Setting range is 2A, then from 10A to 80A. Increment of each click is 10A.
12	Setting voltage point back to utility source when selecting "SBU priority" or "Solar first" in program 01.	Available options in 12V model: 11.5V (default) 	Setting range is from 11V to 12.8V. Increment of each click is 0.3V or 0.2V.
		Available options in 24V model: 23.0V (default) 	Setting range is from 22V to 25.5V. Increment of each click is 0.5V.

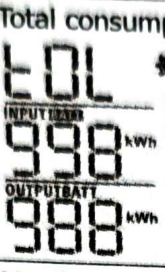
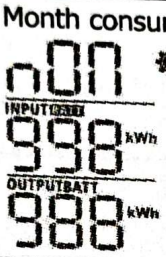
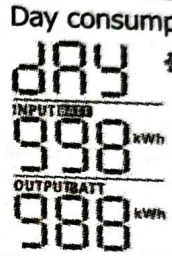
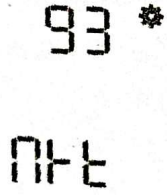
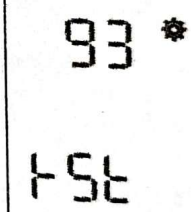
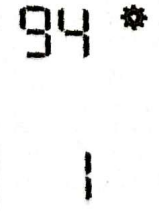
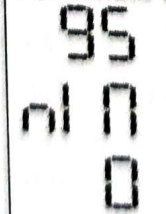
		SOC 10% (default) 	If the battery type (#05) set as Lithium, this setting will change to SOC automatically. Adjustable range is 5% to 95%. Default level is 10%
13	Setting voltage point back to battery mode when selecting "SBU priority" or "Solar first" in program 01.	Available options for 12V model: Setting range is FUL and from 12V to 14.5V. Increment of each click is 0.3V or 0.2V.	
		Battery fully charged 	13.5V (default)
		Available options for 24V model: Setting range is FUL and from 24V to 29V. Increment of each click is 0.5V.	
		Battery fully charged 	27V (default)
		SOC 30% (default) 	Available options for Lithium battery: Setting range is 100% to 10%. Default level is 30%
16	Charger source priority: To configure charger source priority	If this inverter/charger is working in Line, Standby or Fault mode, charger source can be programmed as below:	
		Solar first 	Solar energy will charge battery as first priority. Utility will charge battery only when solar energy is not available.
		Solar and Utility (default) 	Solar energy and utility will charge battery at the same time.
		Only Solar 	Solar energy will be the only charger source no matter utility is available or not.
		If this inverter/charger is working in Battery mode, only solar energy can charge battery. Solar energy will charge battery if it's available and sufficient.	

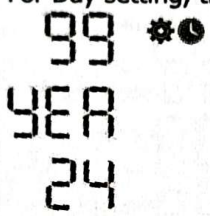
18	Alarm control	Alarm on (default) 18 * bON	Alarm off 18 * bOF
19	Auto return to default display screen	Return to default display screen (default) 19 * ESP	If selected, no matter how users switch display screen, it will automatically return to default display screen (Input voltage /output voltage) after no button is pressed for 1 minute.
		Stay at latest screen 19 * tEP	If selected, the display screen will stay at latest screen user finally switches.
20	Backlight control	Backlight on (default) 20 * LON	Backlight off 20 * LOF
22	Beeps while primary source is interrupted	Alarm on (default) 22 * AON	Alarm off 22 * AOF
23	Overload bypass: When enabled, the unit will transfer to line mode if overload occurs in battery mode.	Bypass disable (default) 23 * byd	Bypass enable 23 * byE
25	Record Fault code	Record enable (default) 25 * FEN	Record disable 25 * Fds
26	Bulk charging voltage (C.V voltage)	12V model default setting: 14.1V 26 * CU 14.1	24V model default setting: 28.2V 26 * CU 28.2

		If self-defined is selected in program 5, this program can be set up. Setting range is from 12.0V to 15.0V for 12V model and 25.0V to 31.0V for 24V model. Increment of each click is 0.1V.	
27	Floating charging voltage	12V model default setting: 13.5V 	24V model default setting: 27.0V
		If self-defined is selected in program 5, this program can be set up. Setting range is from 12.0V to 15.0V for 12V model and 25.0V to 31.0V for 24V model. Increment of each click is 0.1V.	
29	Low DC cut-off voltage	12V model default setting: 10.5V	24V model default setting: 21.0V
		If self-defined is selected in program 5, this program can be set up. Setting range is from 10.5V to 12.0V for 12V model and 21.0V to 24.0V for 24V model. Increment of each click is 0.1V. Low DC cut-off voltage will be fixed to setting value no matter what percentage of load is connected.	
30	Battery equalization	SOC 0% (default)	If Lithium battery is selected in program 5, this program can be set up. Setting range is from 0% to 90% Default level is 0%.
		Battery equalization	Battery equalization disable (default) 
		If "Flooded" or "User-Defined" is selected in program 05, this program can be set up.	
31	Battery equalization voltage	12V model default setting: 14.6V	24V model default setting: 29.2V
		Setting range is from 12.0V to 15.0V for 12V model and 25.0V to 31.0V for 24V model. Increment of each click is 0.1V.	

33	Battery equalized time	60min (default) 33 * 60	Setting range is from 5min to 900min. Increment of each click is 5min.
34	Battery equalized timeout	120min (default) 34 * 120	Setting range is from 5min to 900 min. Increment of each click is 5 min.
35	Equalization interval	30days (default) 35 * 30d	Setting range is from 0 to 90 days. Increment of each click is 1 day
36	Equalization activated immediately	Enable 36 * AEn	Disable (default) 36 * AdS
		If equalization function is enabled in program 30, this program can be set up. If "Enable" is selected in this program, it's to activate battery equalization immediately and LCD main page will shows "E9". If "Disable" is selected, it will cancel equalization function until next activated equalization time arrives based on program 35 setting. At this time, "E9" will not be shown in LCD main page.	
38	Solar energy feeds to the grid	Solar feeds to the grid disable (default) 38 * GtdS	Solar feeds to the grid enable 38 * GtEn
40	Adjustment parameter for EARTH LED.	If EARTH LED of meter is on, it can be off by adjusting the parameter. If unit is in Line mode, this program can be set up. Setting range is from -30 to 30. Increment of each click is 1. The condition of program changed automatically.	
		If unit is not in Line mode, it will show following. 40 *	If unit is in Line mode, it will show following. (default 0) 40 * 12 0
41	Adjustment parameter for REVERSE LED.	30 (default) 41 * 30	If REVERSE LED of meter is on, it can be off by adjusting the parameter. This program can be set up. Setting range is from 0 to 300. Increment of each click is 10.

90	PV power & AC output power consumption	PV & AC output power consumption 	If selected, the display screen will show the consumption by order with total, year, month, day as below. The middle number is the consumption of PV and the last number is the consumption of AC output.
		Total consumption 	Year consumption 
		Month consumption 	Day consumption 
91	Grid power (Input) & Feed Grid power (Output) consumption	Grid & Feed Grid power consumption 	If selected, the display screen will show the consumption by order with total, year, month, day as below. The middle number is the consumption of grid and the last number is the consumption of feed grid.
		Total consumption 	Year consumption 
		Month consumption 	Day consumption 

92	Battery charge power & battery discharge power consumption	Battery charge & battery discharge power consumption 	If selected, the display screen will show the consumption by order with total, year, month, day as below. The middle number is the consumption of battery charge and the last number is the consumption of battery discharge.
		Total consumption 	Year consumption
		Month consumption 	Day consumption 
93	Erase all data log	Not reset (Default) 	reset 
94	Data log recorded interval *The maximum data log number is 6550. If it's over 6550, it will re-write the first log.		Setting range is from 1 to 6 minutes.
95	Time setting - Minute	For minute setting, the range is from 0 to 59. 	
96	Time setting - Hour	For hour setting, the range is from 0 to 23. 	

97	Time setting - Day	For Day setting, the range is from 1 to 31.
98	Time setting - Day	For Day setting, the range is from 1 to 12.
99	Time setting - Day	For Day setting, the range is from 17 to 99. 

Functional Setting

There are two function settings: USB OTG.

Insert an OTG USB disk into the USB port . Press and hold "↺" button for 3 seconds to enter USB Setup Mode. These functions including inverter firmware upgrade from the USB disk and data log export to the USB disk.

1. USB Function Setting

Procedure	LCD Screen
Step 1: Press and hold "↺" button for 3 seconds to enter Function Setting mode. **Step 2:** Press "↑", or "↓" button to selected "upgrade firmware" or "export data log" function.	UPG * LOG *

Step 3: Please select setting program by following the procedure.

Program#	Operation Procedure	LCD Screen
UPG * : Upgrade firmware	This function is to upgrade inverter firmware. If firmware upgrade is needed, please check with your dealer or installer for detail instructions.	
	Press "↵" , if the selected function is ready, LCD will display "rdy".	UPG * rdy
	Press "↑" to upgrade the DSP, "" or "↓" button to upgrade the MCU	UPG * dSP nCU
LOG * : Export data log	Press "↵" , if the selected function is ready, LCD will display "rdy".	LOG * rdy
	Press "↑" button to select "Yes". It will only display LOG. Press "↺" button to return to main screen. Or press "↓" button to select "No" to return to main screen.	LOG * YES no

If no button is pressed for 1 minute, it will automatically return to main screen.

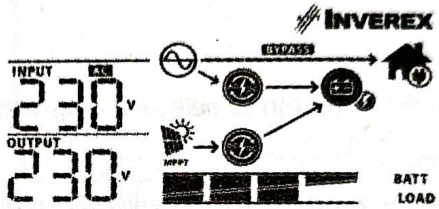
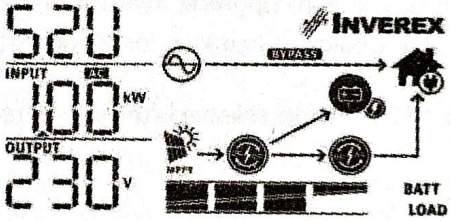
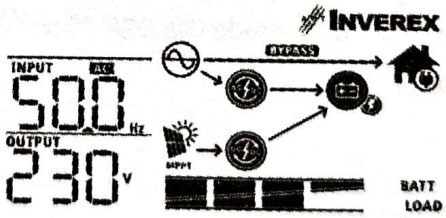
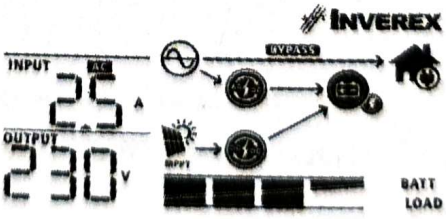
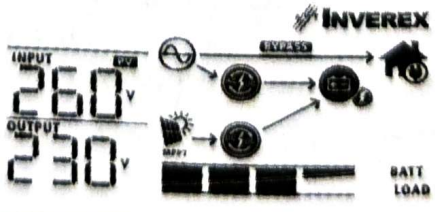
Error message for USB On-The-Go functions:

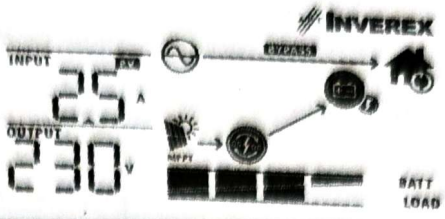
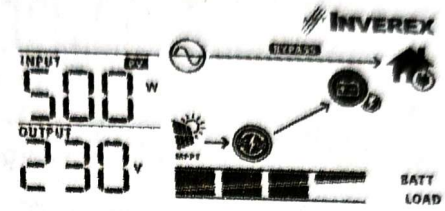
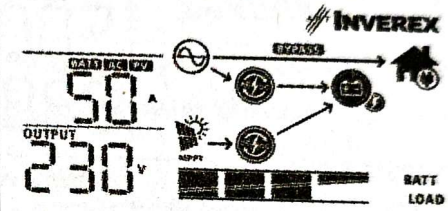
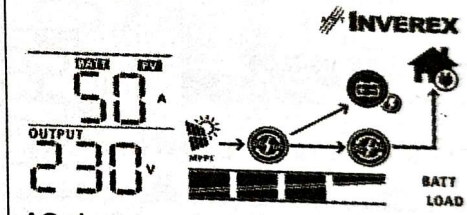
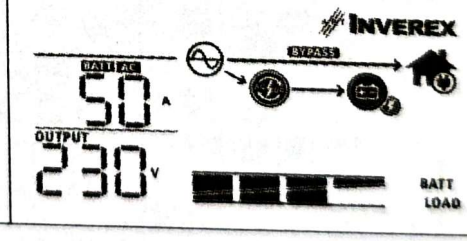
Error Code	Messages
U01	No USB disk is detected.
U02	USB disk is protected from copying.
U03	Document inside the USB disk contains the wrong format.

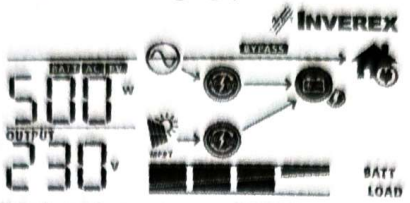
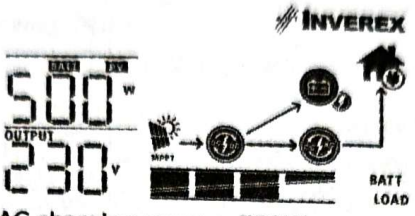
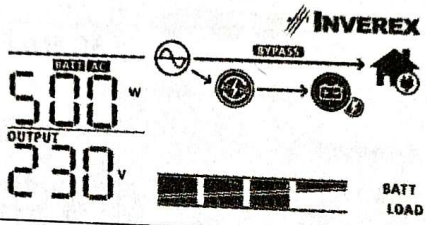
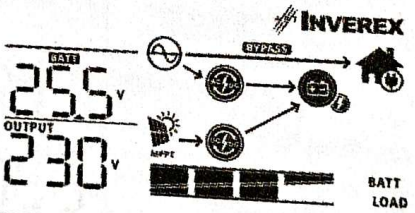
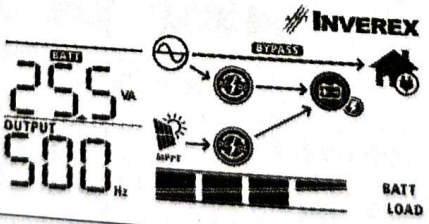
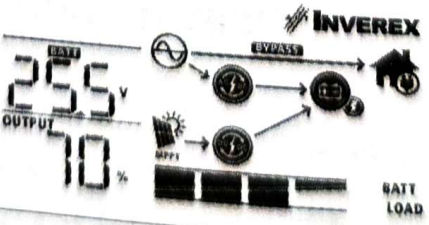
If any error occurs, error code will only show for 3 seconds. After 3 seconds, it will automatically return to the main screen.

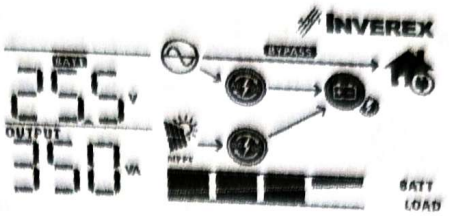
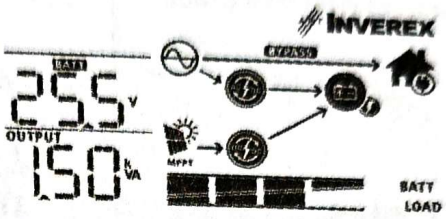
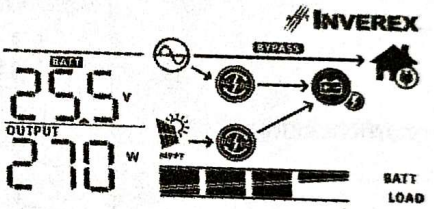
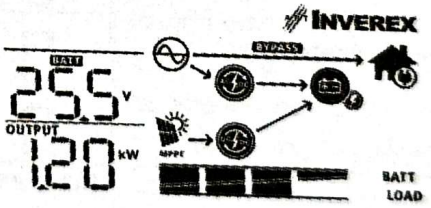
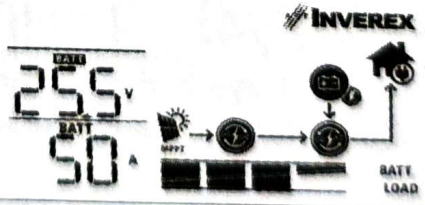
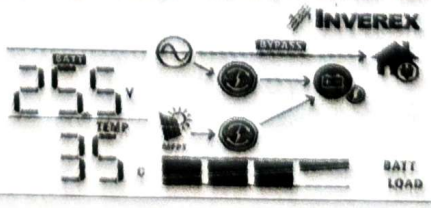
Display Setting

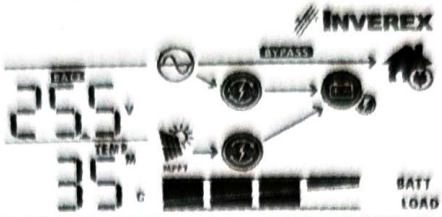
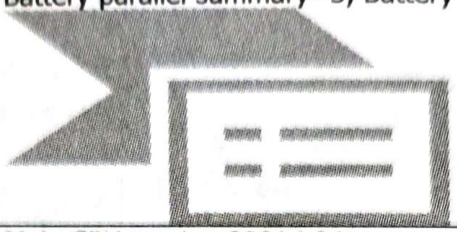
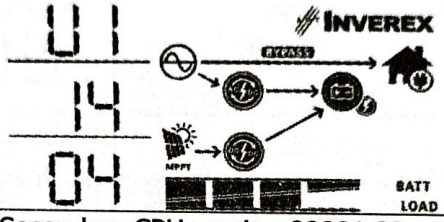
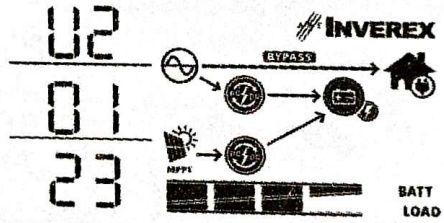
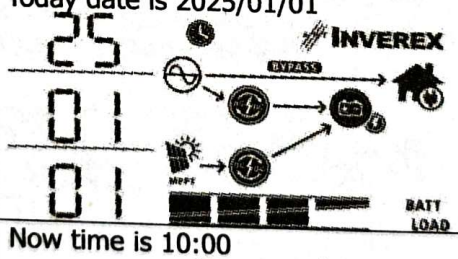
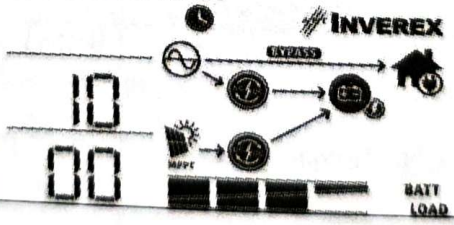
The LCD display information will be switched in turns by pressing "UP" or "DOWN" key. The selectable information is switched as below order: input voltage, input frequency, PV voltage, charging current, charging power, battery voltage, output voltage, output frequency, load percentage, load in Watt, load in VA, load in Watt, DC discharging current, main CPU Version.

Selectable information	LCD display
Input voltage/Output voltage (Default Display Screen)	Input Voltage=230V, output voltage=230V 
Feed Power/Output voltage (Default Display Screen when Feeding Grid)	Feed Power=1000w, output voltage=230V 
Input frequency	Input frequency=50Hz 
Input current	Input current = 2.5A 
PV voltage	PV voltage=260V 

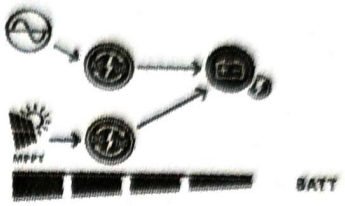
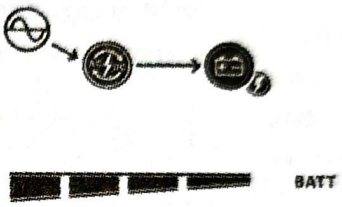
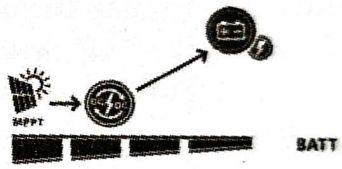
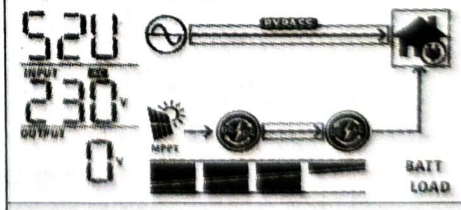
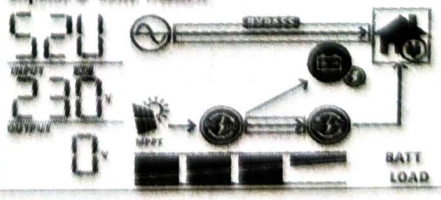
PV current	PV current = 2.5A 
PV power	PV power = 500W 
Charging current	AC and PV charging current=50A  PV charging current=50A  AC charging current=50A 

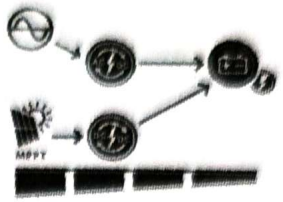
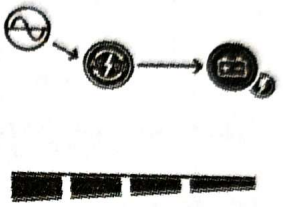
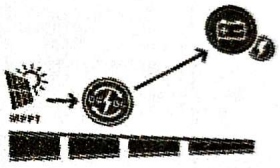
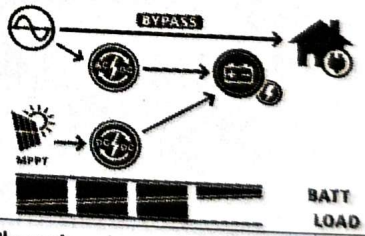
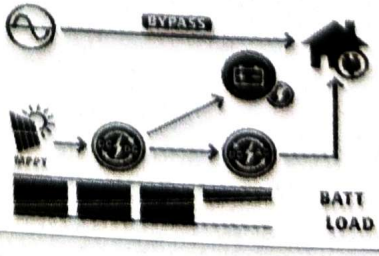
Charging power	AC and PV charging power=500W  PV charging power=500W  AC charging power=500W 
Battery voltage and output voltage	Battery voltage=25.5V, output voltage=230V 
Output frequency	Output frequency=50Hz 
Load percentage	Load percent=70% 

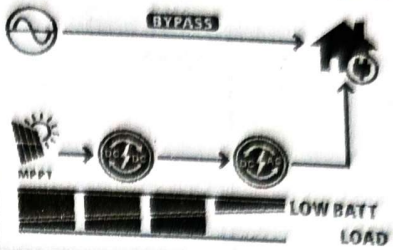
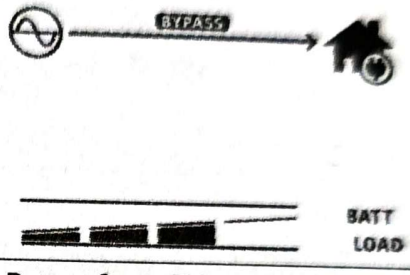
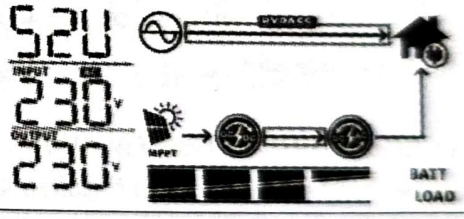
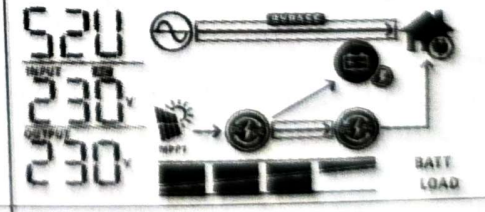
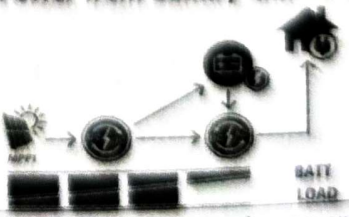
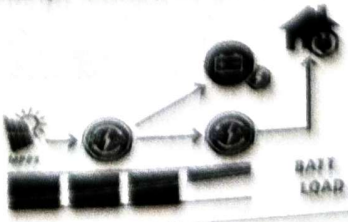
Load in VA	When connected load is lower than 1kVA, load in VA will present xxxVA like below chart.  When load is larger than 1kVA (≧1KVA), load in VA will present x.xkVA like below chart. 
Load in Watt	When load is lower than 1kW, load in W will present xxxW like below chart.  When load is larger than 1kW (≧1KW), load in W will present x.xkW like below chart. 
Battery voltage/DC discharging current	Battery voltage=25.5V, discharging current=50A 
Battery voltage/inverter temperature	Battery voltage=25.5V, inverter temperature=35℃ 

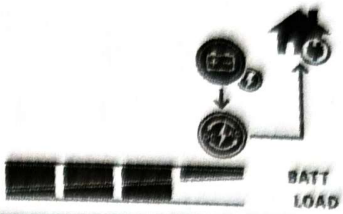
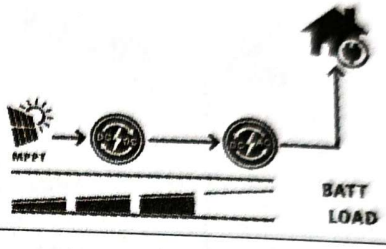
Battery voltage/converter temperature	Battery voltage=25.5V, converter temperature=35℃ 
If battery type select Lithium battery, the information will show on. Battery parallel summary/Battery group	Battery parallel summary=3, Battery group=1 
Main CPU version checking	Main CPU version 00014.04 
Secondary CPU version checking	Secondary CPU version 00001.23. 
Time checking – Year, Month, Day	Today date is 2025/01/01 
Time checking – Hour, Minute	Now time is 10:00 

Operating Mode Description

Operation mode	Description	LCD display
Standby mode **Note:** *Standby mode: The inverter is not turned on yet but at this time, the inverter can charge battery without AC output.	No output is supplied by the unit but it still can charge batteries.	Charging by utility and PV energy. 
		Charging by utility. 
		Charging by PV energy. 
		No charging.
		Power from PV energy only and feed PV energy to grid when battery is not connected. LCD will show "S2U" and some icons marked in red square will flash. 
		PV energy charges battery provides power to the load and feeds remaining energy to the grid. LCD will show "S2U" and some icons marked in red square will flash. 

Operation mode	Description	LCD display
Fault mode Note: *Fault mode: Errors are caused by inside circuit error or external reasons such as over temperature, output short circuited and so on.	PV energy and utility can charge batteries.	Charging by utility and PV energy. 
		Charging by utility. 
		Charging by PV energy. 
		No charging.
Line Mode	The unit will provide output power from the mains. It will also charge the battery at line mode.	Charging by utility and PV energy. 
		Charging by utility.
		If "solar first" is selected as output source priority and solar energy is not sufficient to provide the load, solar energy and the utility will provide the loads and charge the battery at the same time. 

Operation mode	Description	LCD display
Line Mode	The unit will provide output power from the mains. It will also charge the battery at line mode.	If "solar first" is selected as output source priority and battery is not connected, solar energy and the utility will provide the loads. 
		Power from utility. 
		Power from PV energy only and feed PV energy to grid when battery is not connected. LCD will show "S2U" and some icons marked in red square will flash. 
		PV energy charges battery provides power to the load and feeds remaining energy to the grid. Some icons marked in red square will flash. 
Battery Mode	The unit will provide output power from battery and PV power.	Power from battery and PV energy. 
		PV energy will supply power to the loads and charge battery at the same time. 

Operation mode	Description	LCD display
Battery Mode	The unit will provide output power from battery and PV power.	Power from battery only. 
Battery Mode	The unit will provide output power from battery and PV power.	Power from PV energy only. 

Battery Equalization Description

Equalization function is added into charge controller. It reverses the buildup of negative chemical effects like stratification, a condition where acid concentration is greater at the bottom of the battery than at the top. Equalization also helps to remove sulfate crystals that might have built up on the plates. If left unchecked, this condition, called sulfation, will reduce the overall capacity of the battery. Therefore, it's recommended to equalize battery periodically.

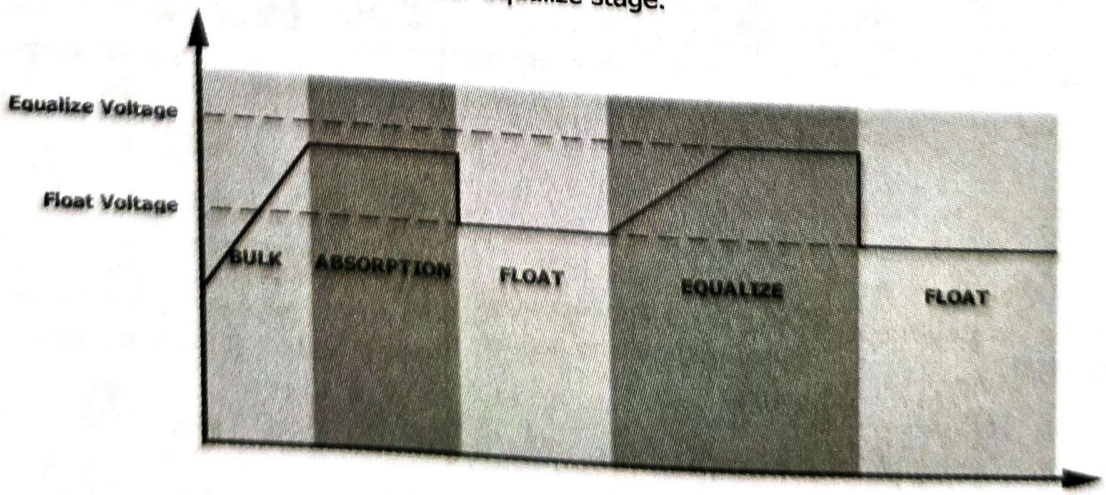
- **How to Apply Equalization Function**

You must enable battery equalization function in monitoring LCD setting program 30 first. Then, you may apply this function in device by either one of following methods:

1. Setting equalization interval in program 35.
2. Active equalization immediately in program 36.

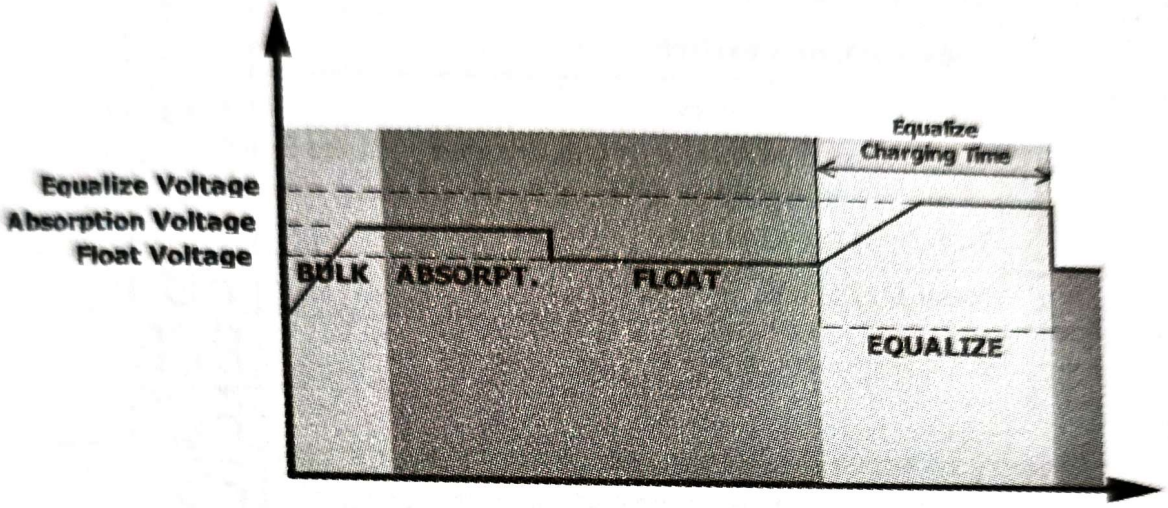
- **When to Equalize**

In float stage, when the setting equalization interval (battery equalization cycle) is arrived, or equalization is active immediately, the controller will start to enter Equalize stage.

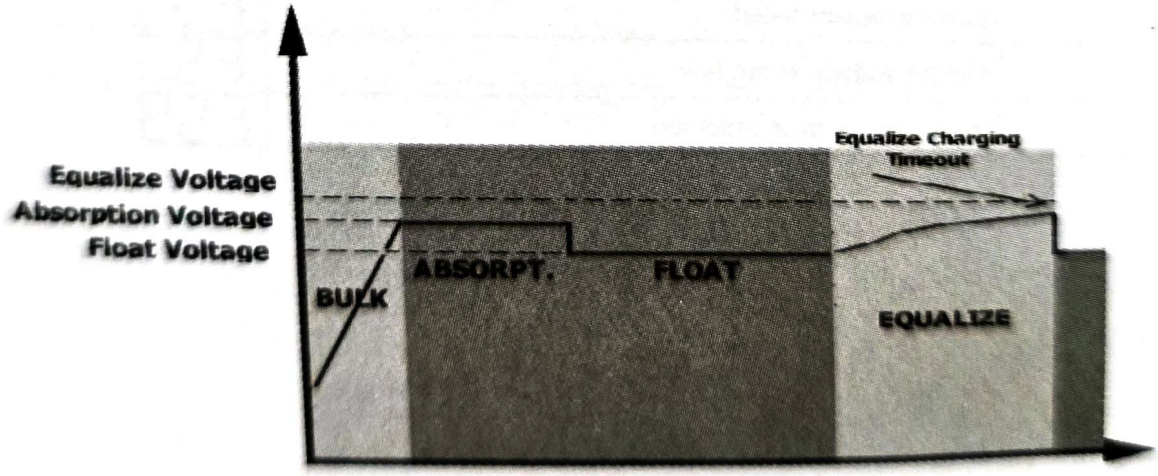


- **Equalize charging time and timeout**

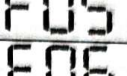
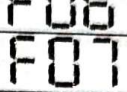
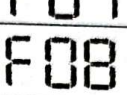
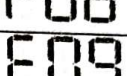
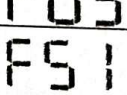
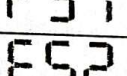
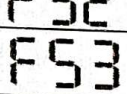
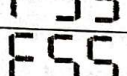
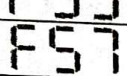
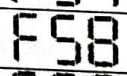
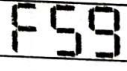
In Equalize stage, the controller will supply power to charge battery as much as possible until battery voltage raises to battery equalization voltage. Then, constant-voltage regulation is applied to maintain battery voltage at the battery equalization voltage. The battery will remain in the Equalize stage until setting battery equalized time is arrived.



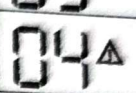
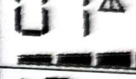
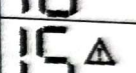
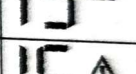
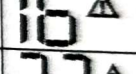
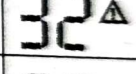
However, in Equalize stage, when battery equalized time is expired and battery voltage doesn't rise to battery equalization voltage point, the charge controller will extend the battery equalized time until battery voltage achieves battery equalization voltage. If battery voltage is still lower than battery equalization voltage when battery equalized timeout setting is over, the charge controller will stop equalization and return to float stage.



Fault Reference Code

Fault Code	Fault Event	Icon on
01	Fan is locked when inverter is off.	
02	Over temperature or NTC is not connected well.	
03	Battery voltage is too high	
04	Battery voltage is too low	
05	Output short circuited or over temperature is detected by internal converter components.	
06	Output voltage is too high.	
07	Overload time out	
08	Bus voltage is too high	
09	Bus soft start failed	
51	Over current or surge	
52	Bus voltage is too low	
53	Inverter soft start failed	
55	Over DC voltage in AC output	
57	Current sensor failed	
58	Output voltage is too low	
59	PV voltage is over limitation	

Warning Indicator

Warning Code	Warning Event	Audible Alarm	Icon flashing
01	Fan is locked when inverter is on.	Beep three times every second	
02	Over temperature	None	
03	Battery is over-charged	Beep once every second	
04	Low battery	Beep once every second	
07	Overload	Beep once every 0.5 second	
10	Output power derating	Beep twice every 3 seconds	
15	PV energy is low.	Beep twice every 3 seconds	
16	High AC input (>280VAC) during BUS soft start	None	
32	Communication interrupted	None	
E9	Battery equalization	None	
bP	Battery is not connected	None	

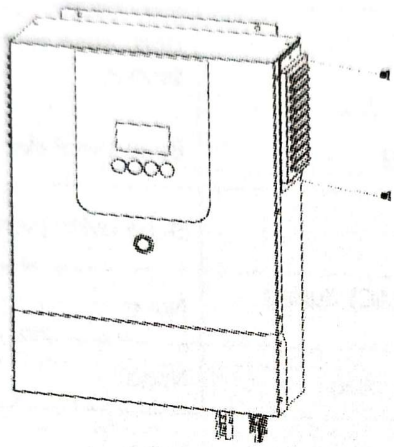
CLEARANCE AND MAINTENANCE FOR ANTI-DUST KIT

Overview

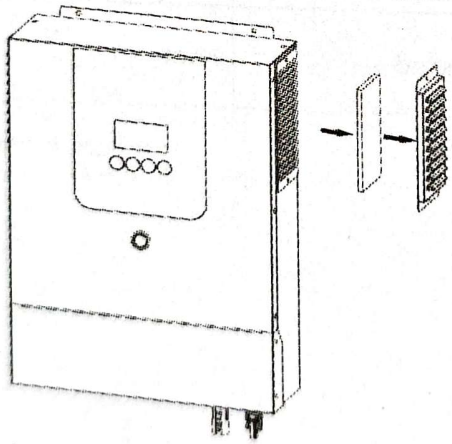
Every inverter is already installed with anti-dusk kit from factory. This kit keeps dusk from your inverter and increases product reliability in harsh environment.

Clearance and Maintenance

Step 1: Please loosen the screw in counterclockwise direction on the top and bottom of the dustproof iron parts.



Step 2: Then, dustproof case can be removed and take out air filter foam as shown in below chart.



Step 3: Clean air filter foam and dustproof case. After clearance, re-assemble the dust-kit back to the inverter.

NOTICE: The anti-dust kit should be cleaned from dust every one month.

SPECIFICATIONS

Table 1 Line Mode Specifications

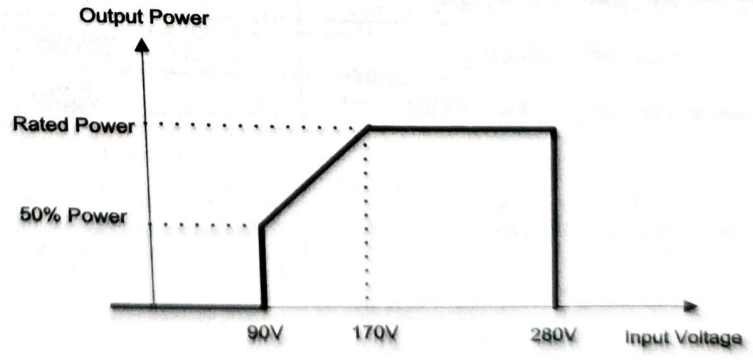
INVERTER MODEL	VEYRONII PREMIUM 1600-12	VEYRONII PREMIUM 2600-24
Input Voltage Waveform	Sinusoidal (utility or generator)	
Nominal Input Voltage	230Vac	
Low Loss Voltage	170Vac±7V (UPS); 90Vac±7V (Appliances)	
Low Loss Return Voltage	180Vac±7V (UPS); 100Vac±7V (Appliances)	
High Loss Voltage	280Vac±7V	
High Loss Return Voltage	270Vac±7V	
Max AC Input Voltage	300Vac	
Nominal Input Frequency	50Hz / 60Hz (Auto detection)	
Low Loss Frequency	40±1Hz	
Low Loss Return Frequency	42±1Hz	
High Loss Frequency	65±1Hz	
High Loss Return Frequency	63±1Hz	
Efficiency (Line Mode)	>95% (Rated R load, battery full charged)	
Transfer Time	10ms typical (UPS); 20ms typical (Appliances)	
Output power derating: When AC input voltage drops to 170V, the output power will be derated.		

Table 2 Inverter Mode Specifications

INVERTER MODEL	VEYRONII PREMIUM 1600-12	VEYRONII PREMIUM 2600-24
Rated Output Power	Battery mode: 1.2KVA/1.2KW PV+ Battery mode: 1.6KVA/1.6KW	Battery mode: 2.5KVA/2.5KW PV+ Battery mode: 2.6KVA/2.6KW
Output Voltage Waveform	Pure Sine Wave	
Output Voltage Regulation	230Vac±5%	
Output Frequency	50Hz	
Peak Efficiency	93%	
Overload Protection	5s@≥130% load; 10s@105%~130% load	
Surge Capacity	2* rated power for 5 seconds	
Nominal DC Input Voltage	12V.0dc	24.0Vdc
Cold Start Voltage	11.5Vdc	23.0Vdc
Low DC Warning Voltage @ load < 50% @ load ≥ 50%	 11.5Vdc 11.0Vdc	 23.0Vdc 22.0Vdc
Low DC Warning Return Voltage @ load < 50% @ load ≥ 50%	 11.7Vdc 11.5Vdc	 23.5Vdc 23.0Vdc
Low DC Cut-off Voltage @ load < 50% @ load ≥ 50%	 10.7Vdc 10.5Vdc	 21.5Vdc 21.0Vdc
High DC Recovery Voltage	15Vdc	31Vdc
High DC Cut-off Voltage	16Vdc	32Vdc
No Load Power Consumption	<35W	<40W

Table 3 Charge Mode Specifications

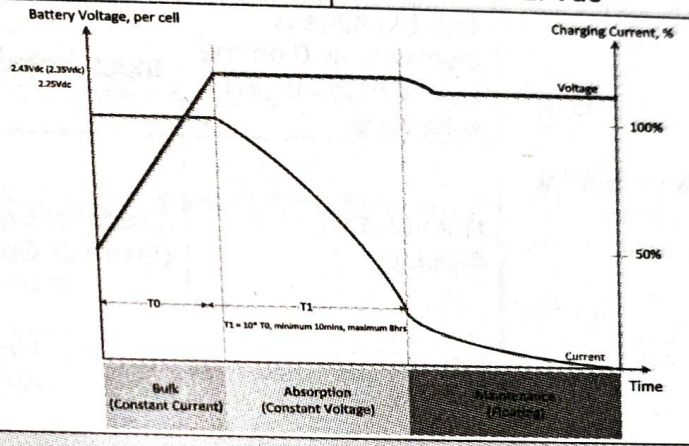
INVERTER MODEL		VEYRONII PREMIUM 1600-12	VEYRONII PREMIUM 2600-24
Utility Charging Mode			
Charging Algorithm		3-Step	
AC Charging Current (Max)		80Amp (@$V_{I/P}$=230Vac)	
Bulk Charging Voltage	Flooded Battery	14.6	29.2
	AGM / Gel Battery	14.1	28.2
Floating Charging Voltage		13.5Vdc	27Vdc
Charging Curve			
MPPT Solar Charging Mode			
Max. PV Array Power		2500W	4000W
Nominal PV Voltage		240Vdc	320Vdc
Start-up Voltage		40Vdc +/- 10Vdc	
PV Array MPPT Voltage Range		30~400Vdc (30~60VDC with battery connected)	30~400Vdc (30~60VDC with battery connected)
Max. PV Array Open Circuit Voltage		450Vdc	450Vdc
Max. Input Current		20Amp	
Max Charging Current (AC charger plus solar charger)		100Amp	

Table 4 General Specifications

INVERTER MODEL	VEYRONII PREMIUM 1600-12	VEYRONII PREMIUM 2600-24
Safety Certification	CE	
Operating Temperature Range	-10°C to 50°C	
Storage temperature	-15°C~ 60°C	
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Dimension (D*W*H), mm	117.4 x 323.8 x 460.4	
Net Weight, kg	9.1	9.8

TROUBLE SHOOTING

Problem	LCD/LED/Buzzer	Explanation / Possible cause	What to do
Unit shuts down automatically during startup process.	LCD/LEDs and buzzer will be active for 3 seconds and then complete off.	The battery voltage is too low (<1.91V/Cell)	1. Re-charge battery. 2. Replace battery.
No response after power on.	No indication.	1. The battery voltage is far too low. (<1.4V/Cell) 2. Internal fuse tripped.	1. Contact repair center for replacing the fuse. 2. Re-charge battery. 3. Replace battery.
Mains exist but the unit works in battery mode.	Input voltage is displayed as 0 on the LCD and green LED is flashing.	Input protector is tripped	Check if AC breaker is tripped and AC wiring is connected well.
	Green LED is flashing.	Insufficient quality of AC power. (Shore or Generator)	1. Check if AC wires are too thin and/or too long. 2. Check if generator (if applied) is working well or if input voltage range setting is correct. (UPS→Appliance)
	Green LED is flashing.	Set "Solar First" as the priority of output source.	Change output source priority to Utility first.
When the unit is turned on, internal relay is switched on and off repeatedly.	LCD display and LEDs are flashing	Battery is disconnected.	Check if battery wires are connected well.
Buzzer beeps continuously and red LED is on.	Fault code 07	Overload error. The inverter is overload 105% and time is up.	Reduce the connected load by switching off some equipment.
		If PV input voltage is higher than specification, the output power will be derated. At this time, if connected loads is higher than derated output power, it will cause overload.	Reduce the number of PV modules in series or the connected load.
	Fault code 05	Output short circuited.	Check if wiring is connected well and remove abnormal load.
		Temperature of internal converter component is over 120°C.	Check whether the air flow of the unit is blocked or whether the ambient temperature is too high.
	Fault code 02	Internal temperature of inverter component is over 100°C.	
	Fault code 03	Battery is over-charged.	Return to repair center.
		The battery voltage is too high.	Check if spec and quantity of batteries are meet requirements.
	Fault code 01	Fan fault	Replace the fan.
	Fault code 06/58	Output abnormal (Inverter voltage below than 190Vac or is higher than 260Vac)	1. Reduce the connected load. 2. Return to repair center
	Fault code 08/09/53/57	Internal components failed.	Return to repair center.
	Fault code 51	Over current or surge.	Restart the unit, if the error happens again, please return to repair center.
	Fault code 52	Bus voltage is too low.	
	Fault code 55	Output voltage is unbalanced.	
	Fault code 59	PV input voltage is beyond the specification.	Reduce the number of PV modules in series.

Appendix I: BMS Communication Installation

1. Introduction

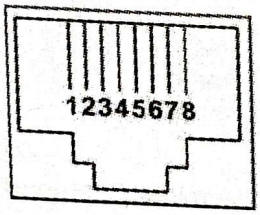
If connecting to lithium battery, it is recommended to purchase a custom-made RJ45 communication cable. Please check with your dealer or integrator for details.

This custom-made RJ45 communication cable delivers information and signal between lithium battery and the inverter. These information are listed below:

- Re-configure charging voltage, charging current and battery discharge cut-off voltage according to the lithium battery parameters.
- Have the inverter start or stop charging according to the status of lithium battery.

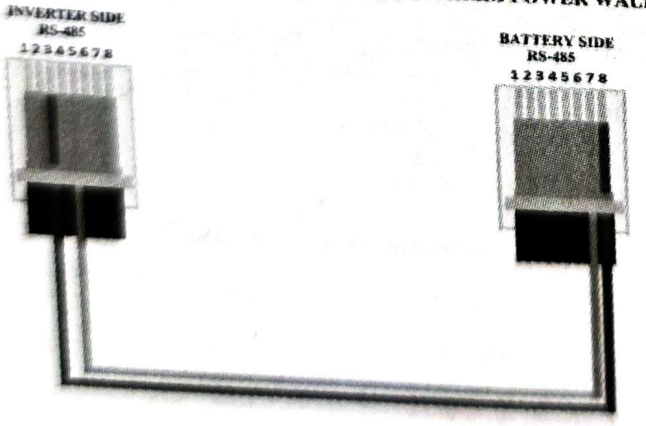
2. Pin Assignment for BMS Communication Port

	Definition
PIN 1	
PIN 2	
PIN 3	RS485B
PIN 4	NC
PIN 5	RS485A
PIN 6	CANH
PIN 7	CANL
PIN 8	GND



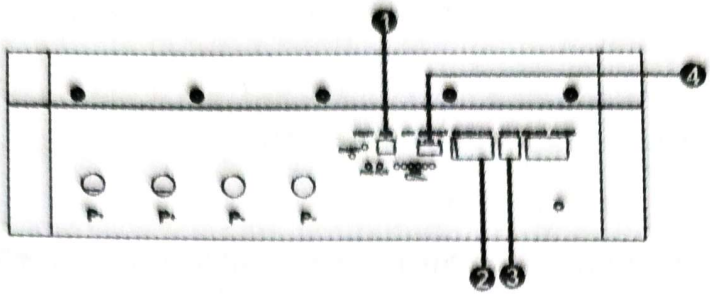
3. Battery Communication Wiring(selecting PYL at setting no 5)

VEYRON SERIES COMMUNICATION WITH INVEREX POWER WALL



NOTE : Communication cable should not be exceed more than 3 meters
&
Battery Communication should be 9600 baud rate

4. Lithium Battery(LIO II-2410E) Communication Configuration

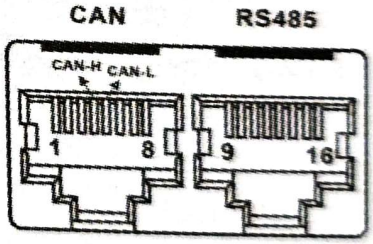


1. ADD: It indicates the unique ADD code for each battery module. It's required to assign a unique ID to each battery module for parallel operation. Maximum 15 battery modules can be operated in parallel. The explanation of its dial switch as shown in below table.

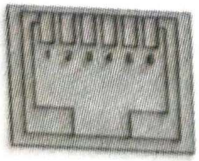
Address Code				ADD	PACK Definition	Address Code				ADD	PACK Definition
1	2	3	4			1	2	3	4		
ON	OFF	OFF	OFF	1	PACK1	ON	OFF	OFF	ON	9	PACK9
OFF	ON	OFF	OFF	2	PACK2	OFF	ON	OFF	ON	10	PACK10
ON	ON	OFF	OFF	3	PACK3	ON	ON	OFF	ON	11	PACK11
OFF	OFF	ON	OFF	4	PACK4	OFF	OFF	ON	ON	12	PACK12
ON	OFF	ON	OFF	5	PACK5	ON	OFF	ON	ON	13	PACK13
OFF	ON	ON	OFF	6	PACK6	OFF	ON	ON	ON	14	PACK14
ON	ON	ON	OFF	7	PACK7	ON	ON	ON	ON	15	PACK15
OFF	OFF	OFF	ON	8	PACK8						

2. CAN & RS485: CAN Communication Terminal:(RJ45port) follow CAN protocol, for output battery information.

CAN Using 8P8C vertical RJ45 socket		RS485 Using 8P8C vertical RJ45 socket	
RJ45 Pin	Definition description	RJ45 Pin	Definition description
1, 3, 6, 7, 8	NC	9, 16	RS485-B1
4	CAN-H	10, 15	RS485-A1
5	CAN-L	11, 14	GND
2	GND	12, 13	NC

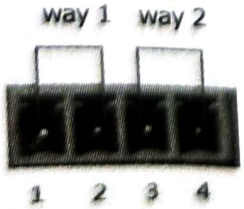


3. RS232 port: (RJ11 port) follow RS232 protocol, for manufacturer or professional engineer to debug or service.


RS232 port

RS232 Use 6P6C vertical R11 socket	
RJ11 pin	Definition description
2	NC
3	TX
4	RX
5	GND

4. Dry contact: Dry Contact Terminal: provided 2 ways input and 2 ways output dry contact signal.



Appendix III: The Wi-Fi Operation Guide

1. Introduction

Wi-Fi module can enable wireless communication between inverter and monitoring platform. Users can remote monitoring and controlling inverter easily by using the i.Solar APP.

The major functions of this i.Solar APP:

- Delivers device status during normal operation.
- Allows to configure device setting after installation.
- Notifies users when a warning or alarm occurs.
- Allows users to query inverter history data.

2. i.Solar App

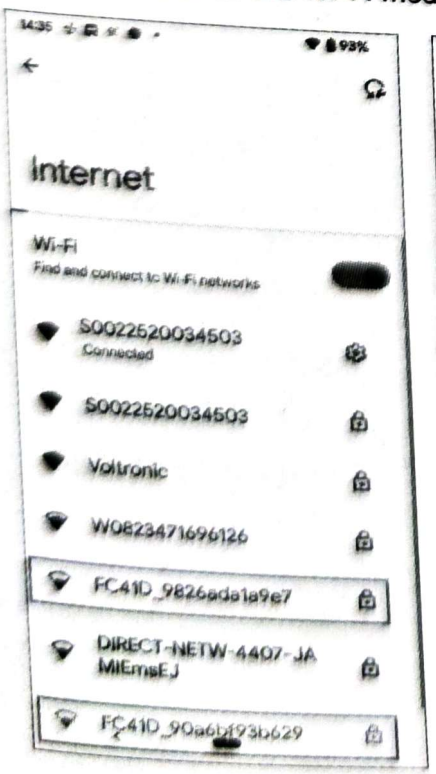
2-1. Download and install APP

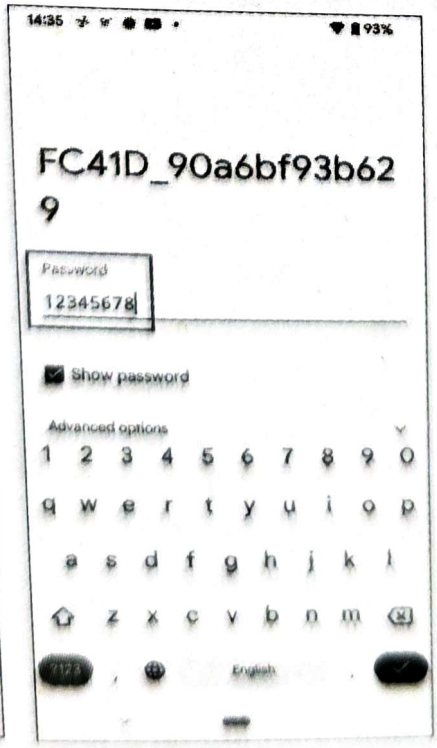
Please find "i.Solar" app from Apple® store or Google® Play Store. Install this app in your mobile phone.

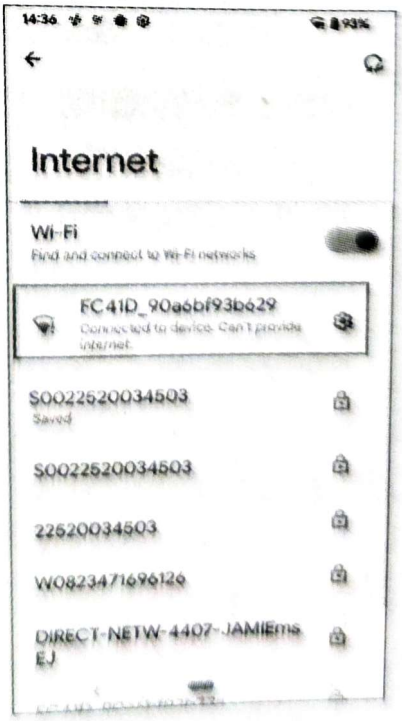
iOS	Android

2-2. Initial Setup

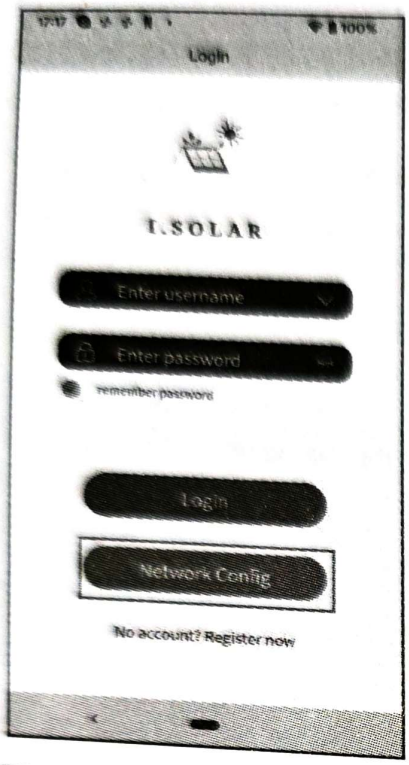
- Turn on the unit.
- Open the Wi-Fi settings from your smart phone.
- Connect your smart phone to the Wi-Fi module. The Wi-Fi named starts with "FC41D_".
- Default password for the Wi-Fi module is: 12345678



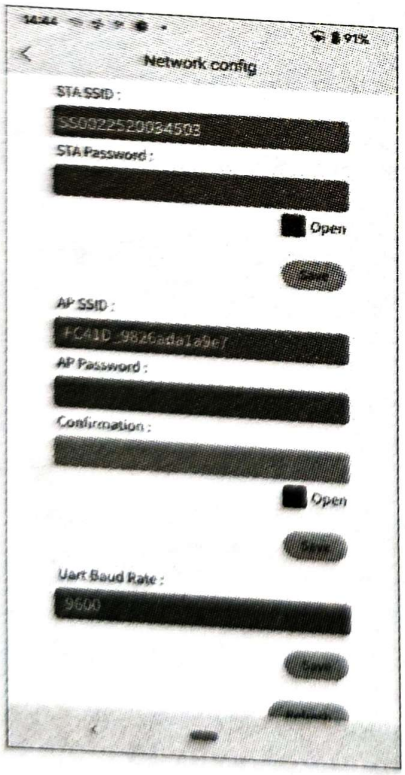




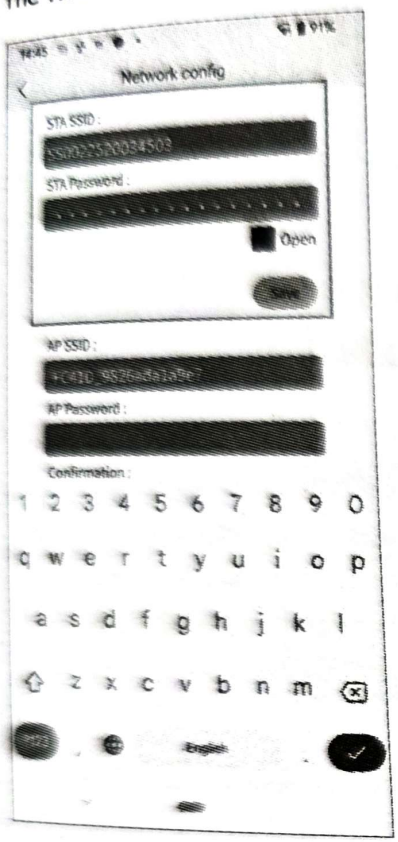
- Once the Wi-Fi connection is successful, click the i.Solar App installed on the phone to enter the login page. Then, click the "Network Config" button to enter the Wi-Fi configuration page.



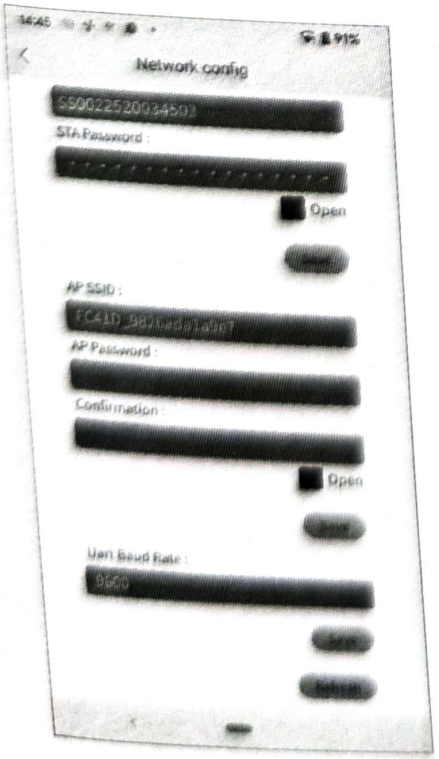
- The configuration page of the "Network Config" shown as following.



- Enter your router name (STA SSID) and router password (STA Password), then click the "Save" button to complete the setting.
If you check "Open" checkbox, you only need to enter the router name (STA SSID), no need to enter the router password. Then, click the "Save" button to complete the setting.
The Wi-Fi module only could connect the router at **2.4GHz**.


Network config
STA SSID :
STA Password :
Open
Save
AP SSID :
AP Password :
Confirmation :
1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p
a s d f g h j k l
z x c v b n m

- Enter the Wi-Fi name (AP SSID) and Wi-Fi password (AP Password) of the Wi-Fi module, confirm the password again and click the "Save" button to complete the setting of the Wi-Fi module.
If you check "Open" checkbox, you only need to enter the Wi-Fi name (AP SSID), no need to enter the Wi-Fi password and Confirmation. Then, click the "Save" button to complete the setting.

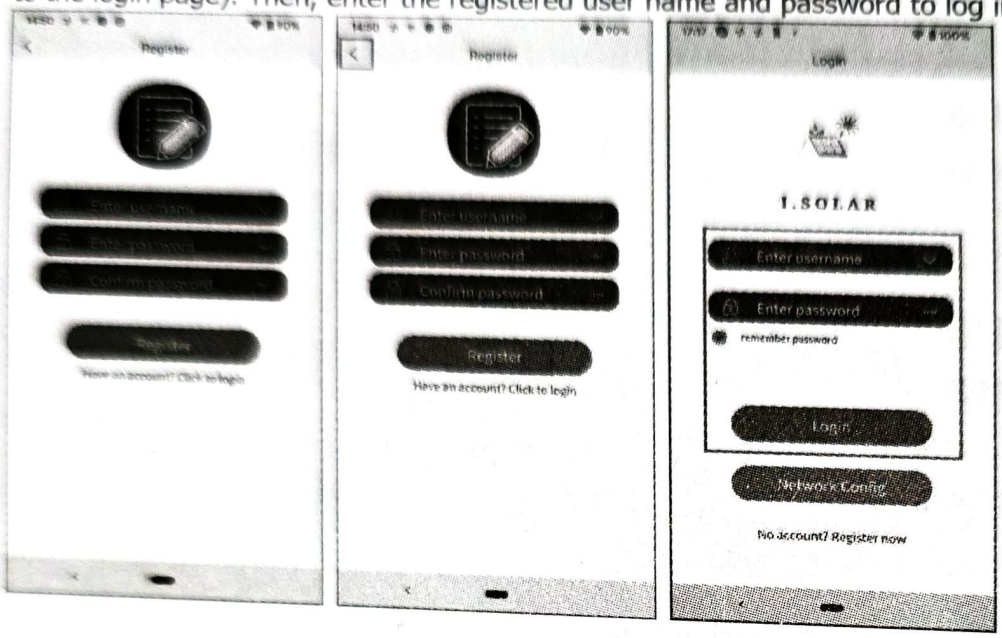


- After configuration, please **forget** the Wi-Fi module on the smartphone to avoid automatic connection and unable to access the Interne

2-3. Login

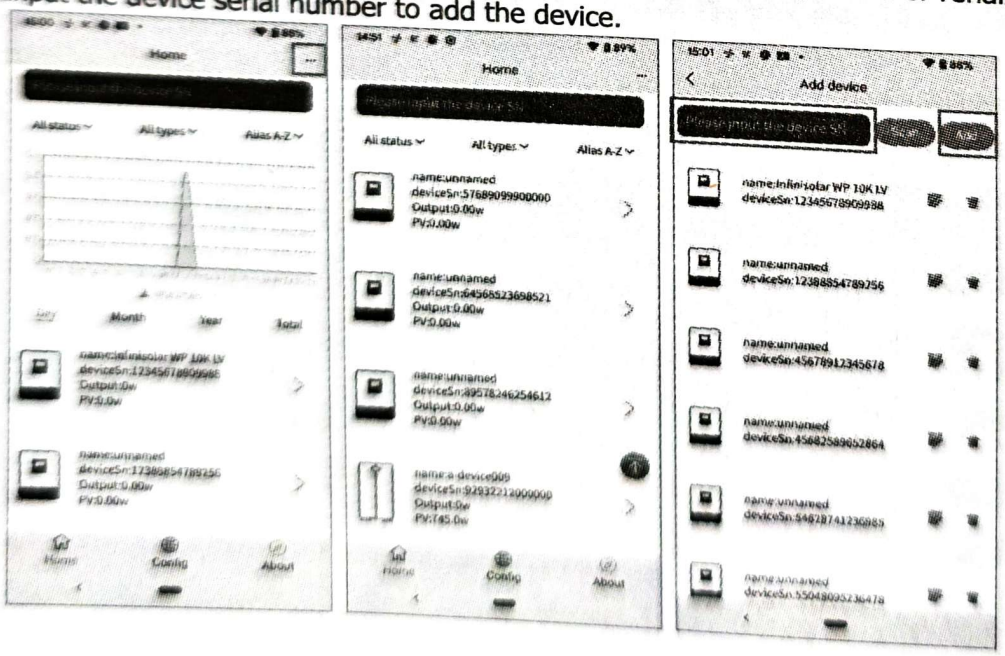
- Connect your smart phone to the router.
- Registration at first time.

After fill in user name and password, click the "Register" button to complete the user registration. Once registration is complete, click "Click to log in" or return to the previous page (click the left arrow to return to the login page). Then, enter the registered user name and password to log in.

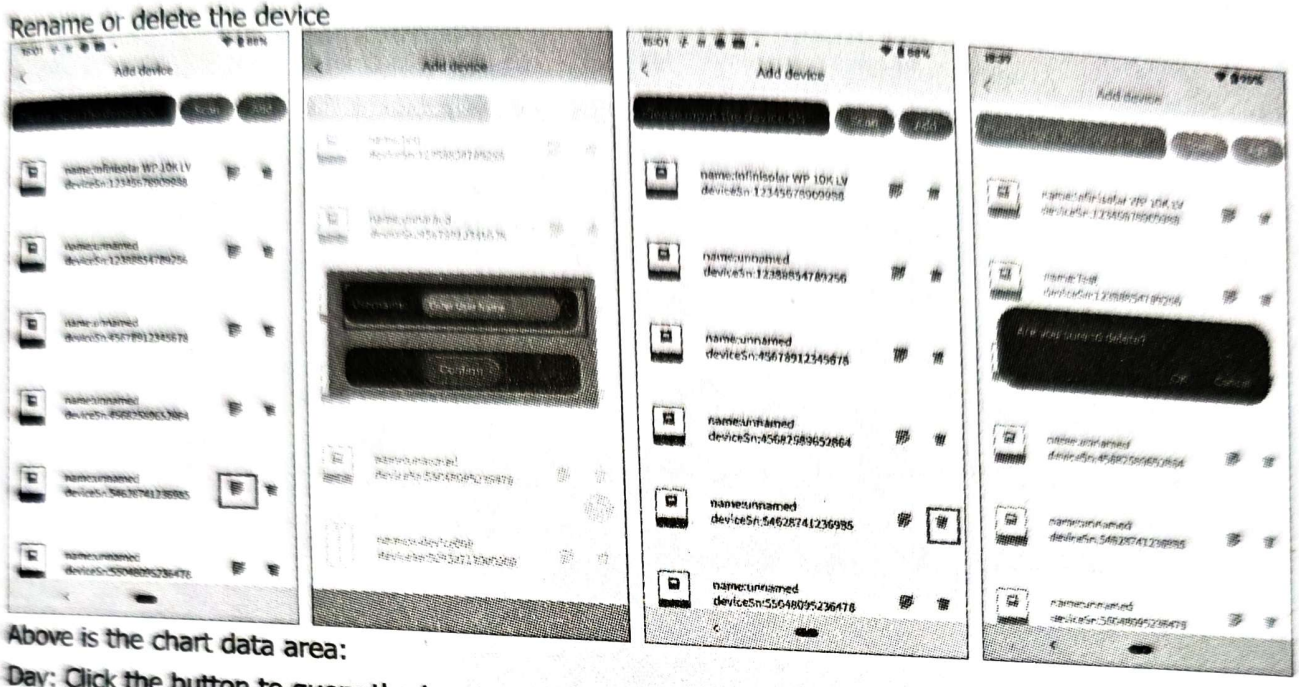


2-4. Home Page

- After login, the default Home page will appear.
- Tap the icon (located on the right top) to enter the page to add, delete or rename the device. Input the device serial number to add the device.



Rename or delete the device



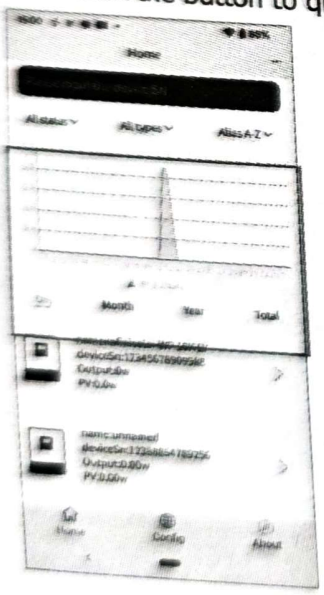
Above is the chart data area:

Day: Click the button to query the hourly power generation data of the current day.

Month: Click the button to query the daily power generation data of the current month.

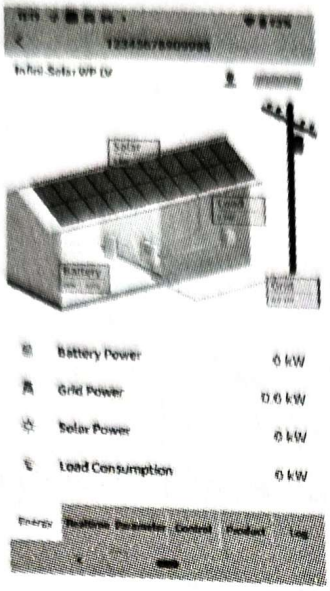
Year: Click the button to query the monthly power generation data of the current year.

Total: Click the button to query the annual power generation data.

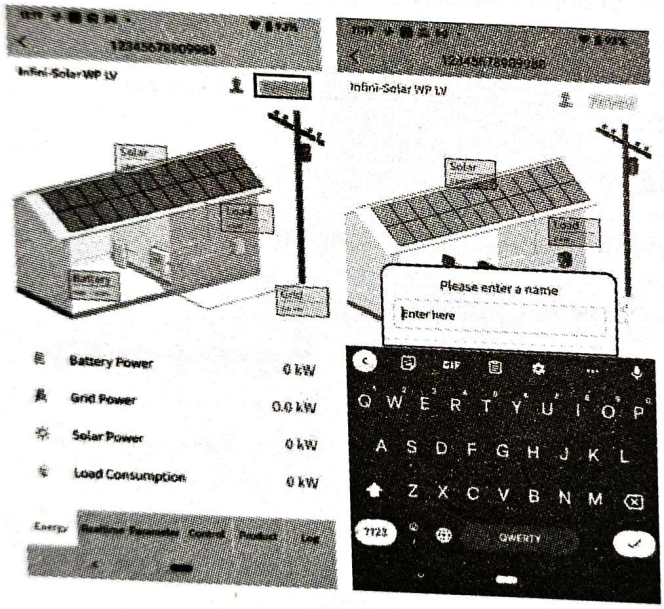


2-5. Real-time data

- Energy: displays battery power, grid power, solar power, and load consumption.



Rename the device.



- Real-time: displays solar, grid, load, and battery information.

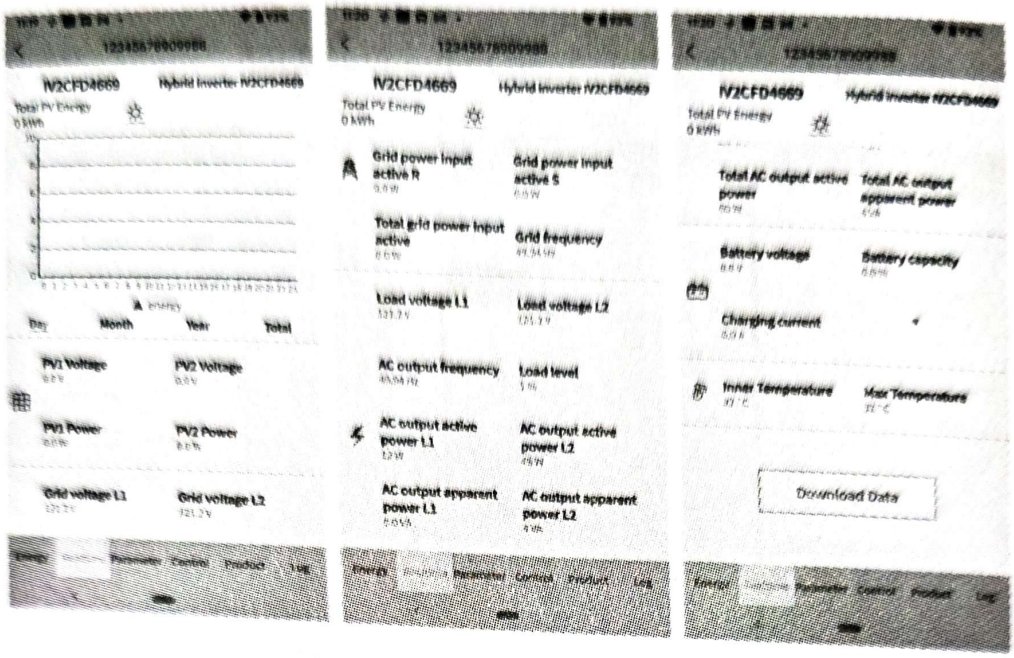
Above is the chart data area:

Day: Click the button to query the hourly power generation data of the current day.

Month: Click the button to query the daily power generation data of the current month.

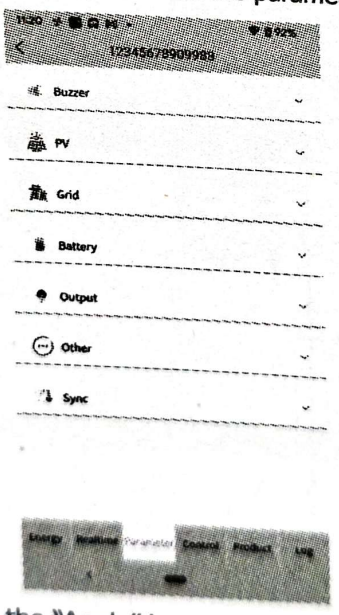
Year: Click the button to query the monthly power generation data of the current year.

Total: Click the button to query the annual power generation data.

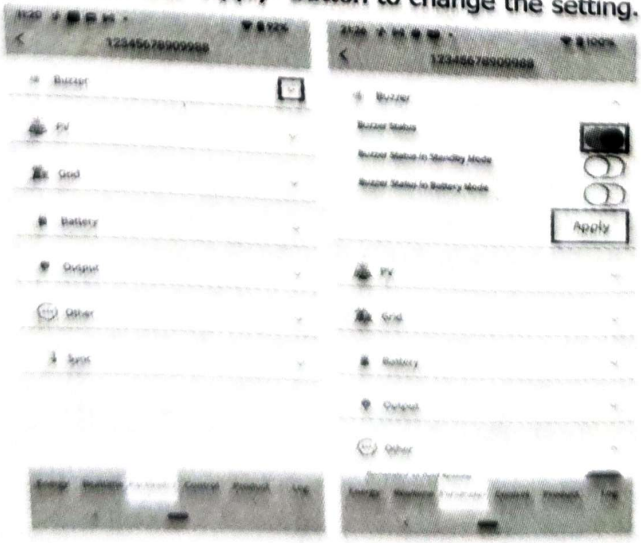


2-6. Parameter

Displays the setting items. Different models, the setting items on the parameter page will be different.

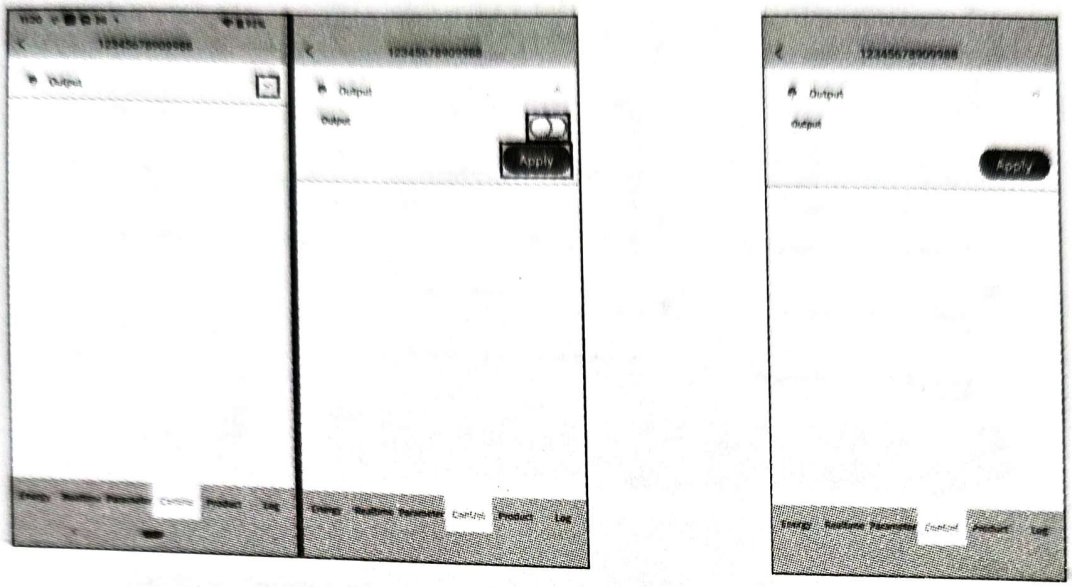


Tap the icon, select the setting and click the "Apply" button to change the setting.



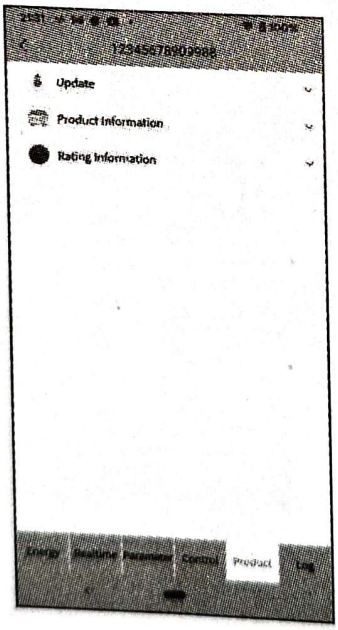
2-7. Control:

Remote control power on/off (The control item not support all models)



2-8. Product

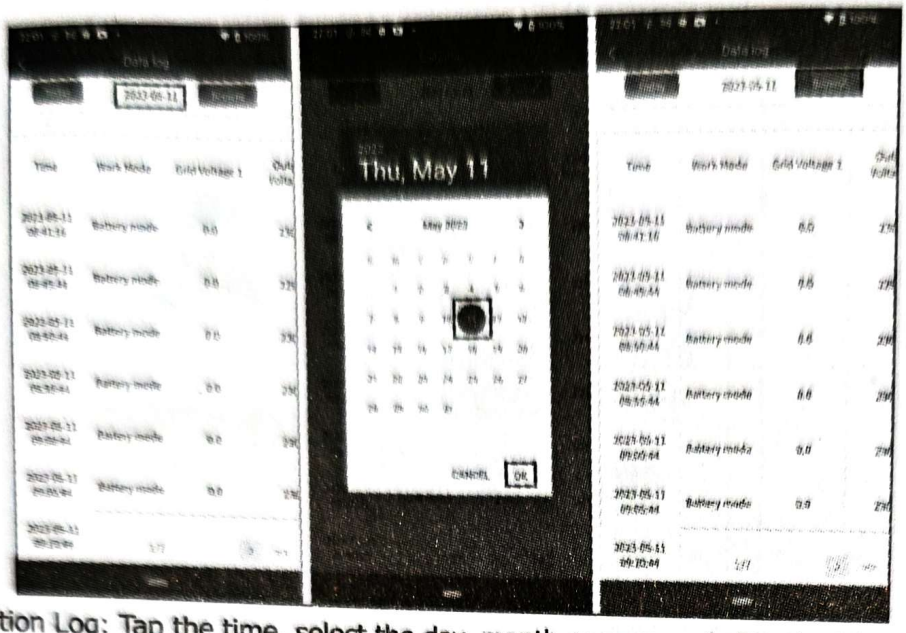
Firmware upgrade, displays product information and rating information.



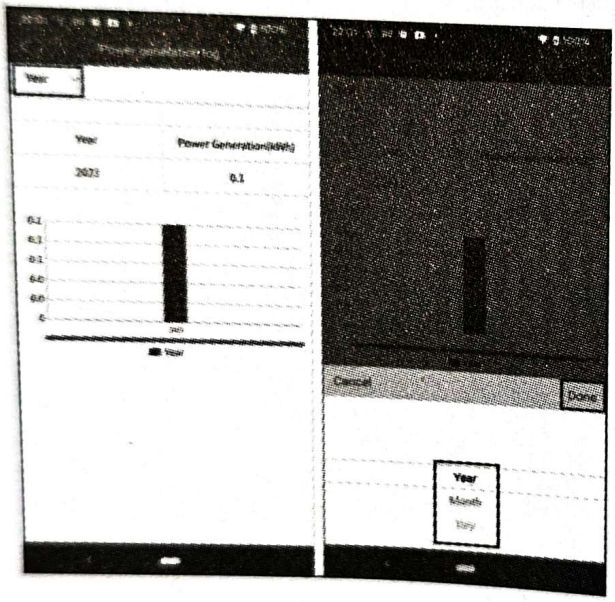
2-9. Log

Change password, remove account and change language

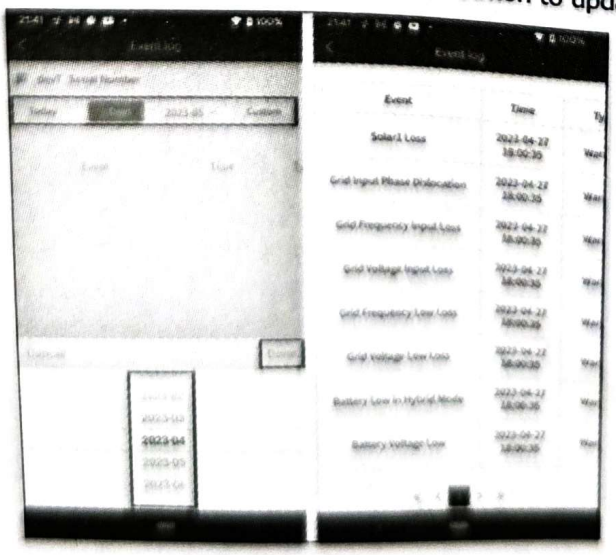
- Log: displays data log, solar power generation log, load consumption log and event.
  Data log: Tap the time, select the date and click the "Browse" button to update log.



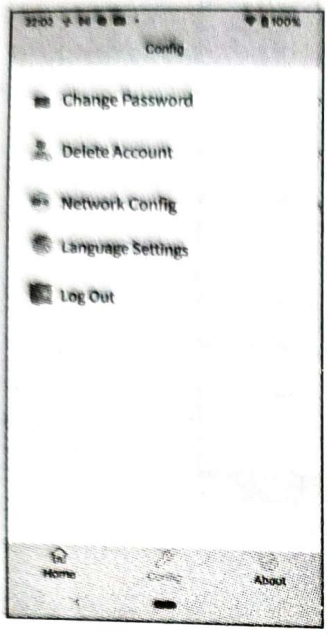
Power Generation Log: Tap the time, select the day, month or year, and click the "Done" button to update log.

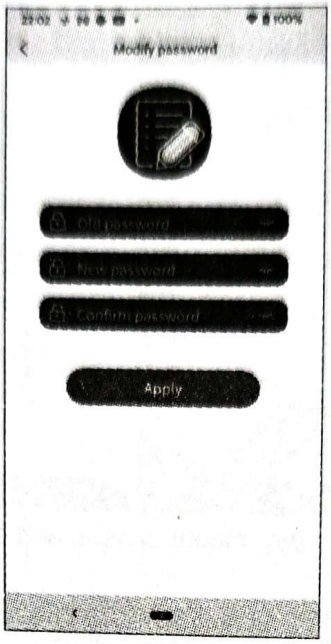


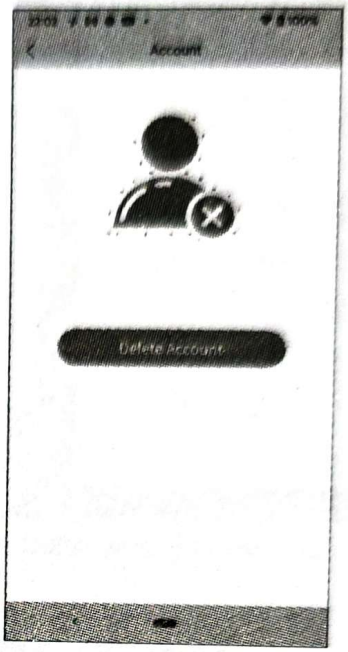
Event log: Tap the time, select the month and click the "Browse" button to update log.



2-10. **Configuration:** change password, remove account and change language







2-11. About